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Illinois Medical Journal

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CONTENTS:

Editorials (for Titles See Extended Table of Contents) 381

ORIGINAL ARTICLES

What Can Be Done for Sinus Trouble. *George E. Shambaugh, M. D., Chicago*..... 417

Rhinoplasty, Practical Considerations. *Samuel Salinger, M. D., Chicago*..... 423

Surgical Anatomy and Esthetic Effects of Submucous Resection. *Adolph M. Brown, M. D., Chicago* 430

Obstetrical Practice in Small City Hospital. *Lewis T. Gregory, M. D.*, and *Vera Whitted, R. N., Urbana, Ill.* 434

Transurethral Prostatic Resection. *Herman M. Soloway, M. D., Chicago*..... 436

Present Day Considerations on Syphilis. *Harold A. Rosenbaum, M. D., Chicago*..... 439

Duodenitis with Acrodynia. *James B. Gillespie, M. D., Urbana, Ill*..... 442

Primary Carcinoma of the Jejunum. *Emil Jonas, M. D., E. I. Steck, M. D.*, and *Julius Brams, M. D., Chicago*..... 444

Mortality of Appendicitis. 456 Cases. *Daniel K. Hur, M. D., Manteno, Ill*.....

Differential Diagnosis of Diseases Causing Hematuria. *E. Bechtold, M. D., Belleville, Ill*..... 452

Mongolism in One of Dizygotic Twins. *R. L. Jenkins, M. D., Chicago*..... 455

(Continued on page 8)

Eighty-Sixth Annual Meeting at Springfield, May 19, 20, 21, 1936

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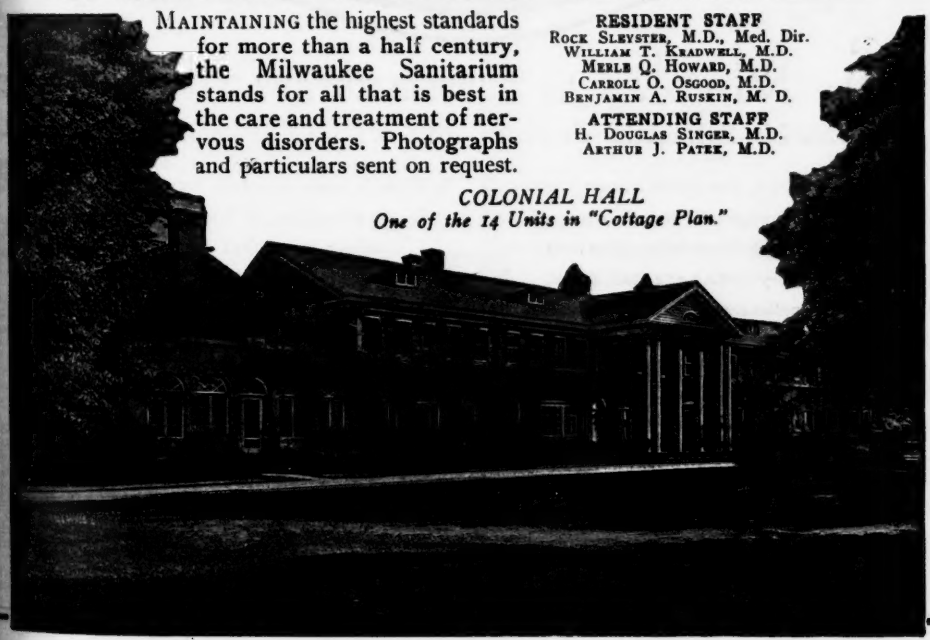

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ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

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ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

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Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

Subscription price of this JOURNAL to persons not members of the Illinois State Medical Society is $3.00 per year, in advance, postage prepaid, for the United States, Cuba, Porto Rico, Philippine Islands, Hawaiian Islands and Mexico. $4.00 per year for all foreign countries included in the postal union. Canada, $3.50. Single current copies, 50 cents.

Editorials

THE BODY POLITIC IS AILING; THE LAITY FUNCTIONS OUT OF TURN AND IN ALL IGNORANCE

In a nation gone crazy over the idea of theoretical reform for much that does not need reformation, and of salvage of what is sick and corrupt at the expense of what is clean and healthy, it is natural for the profession of medicine to expect a greater or less assault at the hands of those who with little innate wisdom still want to be the Lycurguses and Solons of the day.

The trouble is that this assaulting has gone too far. The medical profession can no longer tolerate rankly invidious attacks and accusations, all *along economic lines* rather than on scientific procedure from those egotistical persons peddling half-baked propaganda for activities of which they are basically ignorant. Medicine is not attacked for lack of competent service. It is lambasted because it is not willing to be the burnt offering for the financial murder of dozens of the nation's industries, and for all American ideals.

In April or May of last year, the non-partisan paper, *The United States News,* remarked that in three years our present government had spent more money "than has been spent by all other administrations from Washington to Wilson." In other words the present administration in three years had spent and budgeted $24,206,533,000, while all of the money spent in a previous 124 years had been only a little over three million more or in exact figures $24,521,845,000. According to *The United States News* the present administration of our country has spent the equivalent of a distribution of some $12 for every man woman and child on the face of the entire earth. This sum also would have been sufficient to take care of thirty-one (31) presidential terms of four (4) years each; and for four wars. Something less than three one one-half billions of dollars was the cost of the war of 1861-5 between the states; and this expenditure together with

that of the war of 1812, and of the war with Mexico and Spain is far less than the $4,880,000,000, or four billion, eight hundred and eighty million dollars appropriated by Congress last spring for some funny and rather debatable, no matter how well meant, plans and projects and developments that seem to add lamentably to the high cost of living and the low state of the taxpayer's bank account. Among these projects is the new social security plan with which hoary headed old Europe has been struggling since the days of Bismarck's first workmen's compensatory reforms in the German mines almost a century ago. It is supposed to be the path to an earthly heaven for the man whose salary is in the class called "low brackets." Perhaps, so. And another project is to "socialize medicine," trim the doctors in other words, and foist upon the United States the same inept, tragic system of medical service that is giving those European countries that have adopted it no end of trouble. This medical service, this bureaucratic control of medicine in continental Europe, has wrested the laurels of medical and surgical prowess from the European brow and become a source of economic distress and actually inefficient medical service. Europe is trying now to remedy the same system of socialized medicine that the communistically inclined United States politicians are determined to set as a millstone upon the necks of every physician and every patient in the United States.

Evidently America's lesson of the noble experiment of prohibition was only half learned. Scientific medicine survived that, just as it has survived casualties without end that threatened the nation, and went calmly along its way guided by hard work, faith and science. The trouble has been that medicine has been too busy perfecting science to perfect not only its own defense but the defense of the nation—actually the protection of the country from socialistic bureaucrats who have pretty well managed to crowd with chaos almost every American commonwealth. There is fair chance however that a profession that could banish so many insidious enemies when banded together can probably work its way with knock-out effect against socialist bureaucracy and rank communism if allied shoulder to shoulder against not only the enemy of American principles and consistent democracy, but against civilization itself. Considering medicine's triumph over yellow and typhoid and typhus fevers; its control of syphilis, of smallpox, malaria and diphtheria; its progress against tuberculosis and meningitis and infantile paralysis, to say nothing of the miracles of modern surgery, all glorious victories over curses that invaded the world, why can not scientific medicine allied, and armored by its gifts for diagnosis and indications for remedial potions or practices, swing the nation back to sanity? What the psychiatrist can do to the individual, the medical profession should be able to do first for the nation, and later for the world. The body politic is ailing; the laity functions out of turn and in all ignorance. The civic spectacle is that of aboriginal medical men treating cancer of the liver by feeding the dying patient with toad's tonsils and adding a gentle treatment of thumping tom-toms and sacred fires. "Socialize medicine" and cure the world, they say. The cure will not come that way, though organized medicine, working together and following the precept "Mens sana in corpore sano" can go a long way about it. *Can* go? Nay *must* go, and "Boots and saddles" is sounding now. Medicine cannot be socialized; state medicine must not prevail, and what inner faults in medical administration, or in medical relations between patients and physicians exist, should be eliminated by the medical profession and by that body alone. Let the laity stick to its own last; permit the profession to cure itself and all will be well.

THE EUGENISTS SEEM TO BE UP AGAINST MORE THAN THEY BARGAINED FOR

Folk-lore for generations has persisted that "God sends little children where He wills," even if the blessed domicile is minus a cabbage patch or a doctor's black bag. Science lately admits that there may be something in the saga. Even the advisory council of that bureau of infinite power on earth, the Milbank Memorial Fund, heard recently that neither all the statisticians that their millions may hire, nor all the propagandists these same millions put to work, *cannot* make the higher classes of society reproduce with any higher degree of fertility nor facility of purpose. If this is the case, say the Milbank devotees, then what is the use of it all?

Ethical medicine has been wondering about this same idea for quite some time. With those

socialistic lay practitioners of medicine who have shouted from the housetops that the poorer specimens of the race could be taught to keep from reproducing or be so treated surgically, willy-nilly so that they could not, ethical medicine has not argued. The postulate held the germ of truth. Now that the propagandists have won their point that race-control methods should be broadcast far and wide so that the inferior social group shall not multiply, to their expressed despair these same propagandists do *not* find that the superior classes are making any effort to take up the white man's breeding burden where their so-called inferior brothers and sisters left off. So what to do about it? Like the prohibition experiment the eugenists would seem to be up against more than they bargained for. After all, God made human nature and not any salaried bureaucrat. A pun is the lowest form of wit by tradition and taste, and a byplay upon any man's cognomen is worse. Yet perhaps the editor will be forgiven for remarking that a *pearl* of a speech was made recently by Raymond Pearl, Ph.D., Sc.D., professor of biology in the School of Hygiene and Public Health of the Johns Hopkins University. When Dr. Pearl spoke before the advisory council of the Milbank Memorial Fund he said in part: "Human beings can be made to breed less rapidly than they have in the past, but apparently they can neither be wheedled nor forced into breeding more rapidly or extensively than they want to. Any population policy that assumes the contrary, in however hidden form the assumption is made, seems likely to be confronted by the inexorable, obstinacy of men and women in this particular department of physiology.

"The whole experience of the eugenics movement from its beginning seems to demonstrate rather conclusively that fertility differentials, whether between social and economic classes, or relative to true biological defects, can practically be altered by purposefully planned policies only in one direction. High expressed fertilities of classes can be reduced in a number of different ways. But no effective practical means, in our type of social structure with its existing attitudes, have been found to increase the realized fertility of groups where it is thought desirable to do so."

Perhaps Nature and the powers that be have decided that the politico-bureaucrats and illy-advised-foundations are not going to do anything successfully after all except to "stay in their own backyards!"

THE LARGEST BODY OF SO-CALLED "SUPERIOR CHILDREN" COME NOT FROM THE IDLE RICH

Oliver Optic and Horatio Alger must have had "an eye to the future and an ear to the ground" half a century and more ago when they wrote their famous moral thrillers for the young. Poverty, virtue and success, often genius, went hand in hand in those tomes turned out for the edification of the semi-pioneer young. Often the fictioneer proves prophet. Jules Verne's "Around the World in Eighty Days" and "Darius Green and His Flying Machine" couldn't get a single salvo in the market place, these days. They are both too commonplace. Yet it has taken a Harvard University savant and a collaborator to come out this summer and edify the world with a painfully produced tabulation that adduces that the largest body of so-called "superior children" comes not from the idle rich, the elegant and the acclaimed aristocrats of this our great democracy, but from the middle classes—the group that worries often about where the next pair of shoes comes from. The savant, Professor Edward A. Lincoln, member of the Harvard Psycho-Educational Clinic at Harvard University, aided by Prof. Walter F. Dearborn, began in 1921 to make this study, and employed some 3,000 children in the work. Their findings substantiate the premise that geniuses in the greatest numbers come from the middle classes, the while admitting that the so-called "professional classes" in proportion to their number do contribute the largest number for any class of "superior children." Prof. Lincoln grows optimistic however and says that even if the birth-rate continues to diminish in the superior class, social disaster will not eventuate.

THE OFFICIAL PROGRAM

The official program for the 86th Annual Meeting of the Illinois State Medical Society is published in this number of the ILLINOIS MEDICAL JOURNAL. There are many unusual features in connection with the 1936 annual meeting which should appeal to physicians throughout the state of Illinois.

The programs have been carefully arranged, with a wide range of interesting subjects sched-

uled for each of the scientific meetings. There will be the usual interesting fracture demonstrations which have been so popular during recent annual meetings. More and better scientific exhibits have been arranged than for any previous meeting, and there will be an unusually fine display of technical exhibits to show the physician what the many manufacturers of physicians' supplies have done through another year.

Springfield is centrally situated and readily accessible by auto, train or bus, and with the hard roads leading into the capital city from all parts of Illinois, any member of the Society can reach Springfield within a few hours.

All sessions, general and sectional, will be held in one building, the Knights of Columbus building, where the last meetings in Springfield have been held. This fine building is only a short distance from the hotels and shopping district. All exhibits, scientific and technical, will be displayed in this same building.

The Veterans' Dinner will be held at the Leland Hotel; the President's Dinner and many other functions, will be held in the Abraham Lincoln Hotel, the official hotel for the meeting. Springfield is well supplied with modern hotels and even though a reservation has not been made in advance of the meeting, all members will be assured that they will find comfortable quarters.

All members coming to the meeting and not having a hotel reservation, will be aided by the hotel committee at the registration booth. The registration booth will also be headquarters for information relative to any phase of the meeting, or relative to the city of Springfield.

The Sangamon County Medical Society has had much experience in making local arrangements for the annual session of the Illinois State Medical Society, and they have everything planned now for a most successful 1936 annual meeting.

PLAN ON ATTENDING YOUR OWN ANNUAL MEETING.

Fifty years ago Oliver Wendell Holmes said of Dupuytren, the great surgeon of the Hotel Dieu at Paris:

"No man disputed his reign—some envied his supremacy. Three times did the apopletic thunderbolt fall on that robust brain; it yielded at last, as the bald cliff that is riven crashes down into the valley. I saw him before the first thunderbolt had descended: a square, solid man with a high and full-domed head, oracular in his utterances."

MALCOLM LA SALLE HARRIS, REQUIESCAT!

Although he had passed the honorable estate of three score years and ten, the death on March 22, 1936, of Malcolm LaSalle Harris, was a tragic loss both to science and to the laity, whom Dr. Harris, through his mastership of science, served so faithfully and well.

He was a master surgeon, a master teacher,

and a litterateur of no mean ability upon medical and scientific subjects. Literally Dr. Harris broke down in harness. The rest that he knew he should take after more than a half century of unremitting devotion to medicine and its merciless demands, the rest that his confraternity had urged upon him, and which Harris refused, had its own revenge for its denial. Something over a year ago, while preparing to operate at Henrotin hospital, where he was chief of staff (in June, 1934, to be exact), nature asserted herself. Dr. Harris fainted. There was a subsequent temporary recovery, but Dr. Harris had denied too long to his own body the chance for recuperation that he had insisted upon in others. In complete collapse he was taken to the Milwaukee Sanitarium at Wauwatosa, Wis., where death came.

Born brilliant was Malcolm Harris. He was graduated from Rush Medical College in 1882,

but as he was then only twenty years of age the precocious youth was compelled to wait a year before he could take the state medical examination. After that Harris served until 1884 as an intern at Cook County hospital. For years afterward he maintained an office at 25 East Washington Street, one of the distinctive "Doctors' Buildings" in Chicago.

Harris was a native of Rock Island County, Iowa, where he was born on June 27, 1862, the son of Samuel and Frances Greene Harris. His early education was obtained in the public schools of Iowa. His honors were many, and his capacity for hard work and great attainment almost miraculous. He had a brain like a steel trap and a vast fund of general information to background his acute scientific knowledge. In debate he was little less than a wizard, as adept in an extemporaneous attack as in one that had been studiously prepared. Of medium height, fair coloring, delicate yet sturdy build and of handsome physiognomy he was a social favorite though far from being what is usually classified as a "society doctor." His practice ranged from the slums to society's richest purlieus. Among scientific society presidencies Dr. Harris had held this office for the Chicago Medical Society, the Chicago Pathological Society, the American Medical Association, the Western Surgical Association, and the American Association of Clinical Surgery. He was one of the early "medical economists."

Dr. Harris became a member of the House of Delegates of the American Medical Society following its reorganization in 1901 and was in attendance at all sessions either as a member of the House, of the Board of Trustees, or of the Judical Council from 1901 through 1934—a record of thirty-three years of service. A member of the Board of Trustees of the A.M.A., from 1903 to 1918, for the most of that time Harris served as secretary of the board. From 1918 through 1928 he was member and chairman of the A.M.A.'s Judicial Council. Also he was a member of the International Surgical Association and the American Surgical Association. During 1898 and 1899 Harris was secretary in the Section on Surgery of the American Medical Association. Contributions to the Oxford, Keen's and Bryant's Systems of Surgery and his translation and editing of Braun's "Local Anesthesia" are among Dr. Harris' most widely known medical writings, outside of significant essays in the fields of statesmanship and medical economics. From 1889 until 1935, Dr. Harris served continuously as secretary of the board of trustees of Henrotin hospital and in 1935 was retired as president emeritus. His friends were legion among distinguished medical, industrial and civic leaders. So exact was his mind, so profound his thought, so clear his perspective, so keen his analytical psychology that the minds and methods of men were to him practically an open book. He was a reserved man, and though his friends were many, his intimates were few.

Surviving Dr. Harris are his widow, the former Rose Breckinridge of West Winsted, Conn., to whom he was married on October 12, 1887, and their one daughter, Florence, now Mrs. Max von Schlegell of Baltimore, Md.

HOTEL ACCOMMODATIONS

The members of the Sangamon County Medical Society in Springfield and the surrounding county are to be the hosts for the 1936 annual meeting and have been working for some months to make it an important and successful gathering.

Although Springfield is well supplied with excellent hotels it is wise to make early reservations to insure hotel accommodations. This is particularly desirable because of the legislative activity and the many conventions that select Springfield as a meeting place.

Members are urged to send reservations direct to the hotels.

Abraham Lincoln Hotel	300 rooms
St. Nicholas Hotel	350 rooms
New Leland Hotel	150 rooms
Illinois Hotel	60 rooms

There are other hotels, which are smaller but comfortable.

HOMER P. MACNAMARA, M. D.,
Chairman, Committee on Hotels.

NOTICE TO GOLF ENTHUSIASTS

Golfing medicos attending the Annual Meeting of the State Medical Society will have the exceptional opportunity of playing on the beautiful eighteen-hole Illini Country Club course and for their benefit there will be held a handicap tournament on Tuesday morning with suitable prizes and luncheon at noon.

Foursomes and twosomes from various cities will contest and the Committee will be glad to arrange a game for you if alone. Bring your clubs along to the meeting and the tournament on Tuesday morning, May 19, 1936. Any information desired will be gladly given if you write to Dr. Fred P. Cowdin, Springfield, Illinois, *Chairman, Golf Committee.*

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
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E. S. Hamilton, M. D., Chairman
Kankakee, Illinois

C. G. Farnum, M. D.
R. K. Packard, M. D.
J. S. Templeton, M. D.
C. E. Wilkinson, M. D.

H. M. Camp, M. D.
I. H. Neece, M. D.
C. B. Reed, M. D.
C. S. Skaggs, M. D.

Address all letters and communications to the Chairman.

The changes in the proposed methods for care of the indigent have become so frequent in the past few months that it is impossible for those of us who are not watching the Legislature from day to do to know what the latest plan is. Accordingly, I consulted a member of the Legislature today for the last word. He tells me beginning the first of May the responsibility will be on the County Board of Supervisors. As intimated in the last article in most instances the Board of Supervisors is not ready either as to organized personnel or available finances to accept this great responsibility. In addition it does not meet with the approval of political organizations. As a result Senate Bill 9 was passed recently, which returns the care of the indigent to the local Townships, which under Senate Bill 7 are empowered to raise funds in excess of the twenty-five cent limitation imposed by previous legislation for poor relief. This Township responsibility begins July 1, 1936.

This change will be agreeable, we feel, to the majority of the medical profession. In almost all parts of the state, the past relationship between the medical profession and the local Supervisor has been worked out in manner acceptable to both of them. It is now time for the previous agreement, which worked in the past, to be renewed. If the previous agreements were unsatisfactory, it is an excellent time for the medical profession to work out a plan which is mutually agreeable. Two methods have been used which have been satisfactory to the medical profession. One is for the work to be distributed to all members of the profession, who desire to participate in the work, and at the choice of the patients. The rate of pay for this service is less than the regular fee bill of the community in most cases, although in a few places the regular fees are paid. While this latter condition is probably as it should be and in agreement with the prices paid for all other necessities of life, it will be difficult to change some of the supervisors, who for many years past have been accustomed to reduced prices. However, there can be no criticism of an attempt to correct previous defects. The other method which has worked very well in a few communities is for the County Medical Society to enter into a contract with the Supervisor for the medical services to the indigent. Then the members of the society divide into groups and work about two or three months of the year. The fees collected in accordance with the contract entered into are used in any manner agreeable to the members, being either pooled and used to pay dues to the State Medical Society, Journal A. M. A., maintaining Club Rooms, purchasing libraries, etc., or to be divided amongst the members according to either a pro rata share or the amount of service rendered by each member.. The method agreed on will depend on the local situation, but now is the time for definite planning and the sooner this work is under way, the better the chances for successful culmination. I know that you are all tired of the repetition of this column on this subject, but there is no question of greater importance to the medical profession at this time than the care of the indigent and the compensation therefor.

According to an article in the world's greatest newspaper, the Group Hospitalization plan is about to be started in Chicago on a somewhat extensive scale. From the preliminary reports this plan will not be under the direct supervision of the medical profession but will be by hospital superintendents. There was some suggestion in the article read, that there might be considerable lay supervision. Of course this latter is one of the chief dangers and objections to the success of the plan from the viewpoint of the medical profession. It will be interesting to watch the development of the plan; the success or failure of the same. The trial of such a plan was inevitable and the only regret is that the medical profession did not have complete con-

trol of the same. We well know that such control means a lot of work for some few men and that there is no recompense for the work and time expended, other than the satisfaction of a job well done. We hope that no epidemic or great catastrophe occurs to give the plan an unfair trial, for the success or failure will have great influence on the rest of Illinois.

We hope that the attendance of the profession of Illinois at the annual state meeting will be greater than ever before and ask that those who attend pay especial attention to the papers presented on the subject of medical economics. A complete program of the meeting is available in this Issue of the ILLINOIS MEDICAL JOURNAL. Select the interesting papers and arrange to attend their presentation and participate in the discussion thereof. It is by a frank and earnest discussion of our problems that the proper solution is arrived at. We regret that the complete program is not available to the Committee at this time.

We trust that all members of the society will feel free to talk over their economics problems with some member of the Committee at the annual meeting.

E. S. HAMILTON,
Chairman of Committee on
Medical Economics.

CHANGE OF ADDRESS

The Educational Committee of the Illinois State Medical Society announces the removal of its offices to Room 1416, 30 North Michigan Avenue.
Telephone—State 4415.

ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The American Association for the Study of Goiter will meet at the Drake Hotel, Chicago, on June 8, 9 and 10. Dr. Nelson M. Percy is president-elect. The meeting consists of sessions Monday morning and afternoon, Tuesday afternoon and Wednesday afternoon. Hospital clinics will be held Tuesday and Wednesday morning.

READ THIS

University of Illinois College of Medicine alumni—Faculty informal entertainment and buffet-supper in Chicago, June 4 at 8 P. M. at the Research Hospital. Make reservations now. Medical alumni dues of one dollar includes admission. Invited guests one dollar.

W. H. STREICHER,,
Secretary Alumni Association,
1853 W. Polk St.,
Chicago, Ill.

ALUMNI AND FRATERNITY MEN, ATTENTION

General gathering of alumni and fraternity men and their friends, Illinois State Medical Meeting, Tuesday, May 19, at 6:00 P. M., Leland Hotel, Springfield. Inquire for ticket at registration desk.

A business meeting and luncheon of the American Academy of Pediatrics, State of Illinois, will be held at 12:30 P. M., Tuesday, May 19, 1936, in Parlor K, Abraham Lincoln Hotel, Springfield.

All members are urged to be present.

MAURICE L. BLATT, M. D.,
Chairman State of Illinois,
American Academy of Pediatrics.

COMMITTEE CHAIRMEN OF THE WOMAN'S AUXILIARY TO THE SANGAMON COUNTY MEDICAL SOCIETY

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Information and Junior Aides—Mrs. Robert Flentje.
Luncheon—Mrs. S. R. Magill, Mrs. C. W. Milligan.
Dinner Dance—Mrs. J. E. Reisch.
Publicity—Mrs. Winston H. Tucker.
Tickets and Printing—Mrs. D. I. Martin.
Transportation—Mrs. J. A. DeFreitas.
Tea at Executive Mansion—Mrs. O. E. Ehrhardt.
Lake Drive—Mrs. Harry Otten.
Board Breakfast—Mrs. A. G. Aschauer (deceased).
Bridge Dinner—Mrs. J. C. Jackman.

AMERICAN MEDICAL SERVICE

The institution of medicine in America is the best, most elaborate, as well as the most expensive in the world. For the most part this is perhaps just as it should be. Every twenty-fourth dollar of our ninety billion national income goes for health conservation or disease prevention or cure. Counting doctors, dentists, druggists, nurses, "irregular practitioners," technicians, hospital employees, and others, together with the rapidly growing army of up-lifters and social service workers, better than one of every seven of our one hundred and twenty-five million people is directly employed in this vast heterogeneous structure. The licensed doctors of medicine and dentistry are but a small fraction of this formidable array of supernumeraries—many of which are not only unnecessary but are actually harmful.—Milwaukee Medical Times.

FALLING BIRTH RATE

The decline in the birth rate extends to practically every civilized nation in the world. It has been going on for more than half a century; and the latest available data, which relate to 37 countries, and with every continent save Africa represented, show that the rapidity of the fall has been accentuated in the last five years.—Statistical Bulletin.

ILLINOIS STATE MEDICAL SOCIETY
EIGHTY-SIXTH ANNUAL MEETING

SPRINGFIELD, ILLINOIS

May 19, 20, 21, 1936

OFFICIAL PROGRAM

THE PRESIDENT'S DINNER

According to the usual custom in this Society Wednesday evening is devoted to the honoring of our President, Dr. Charles B. Reed of Chicago. The dinner will be held in the ball room of the Abraham Lincon Hotel at 7:00 P. M., Wednesday, and every member of the Illinois State Medical Society present at the meeting should participate in this event.

The past presidents of the Society are honor guests at the dinner although they will not be asked to make any speeches. The immediate past-president, Dr. Charles S. Skaggs, will act as toast master at the President's Dinner.

The Chairman of the Council, Dr. I. H. Neece, will present the President's Certificate to Dr. Reed following the dinner service. The complete program for the Dinner will be released on Wednesday evening.

Following the Dinner, the President's dance will be given with a good orchestra on hand, and those desiring to play bridge will be cared for, and suitable prizes awarded to the winners.

DO NOT FORGET THE PRESIDENT'S DINNER.

VETERAN'S SERVICE COMMITTEE DINNER

The annual dinner of the Veterans' Service Committee will be held on Tuesday Evening, May 19, 1936 at the Abraham Lincoln Hotel. Dr. F. O. Fredrickson, Chairman of the Committee will act as toastmaster for the occasion, and all members of the Society and guests desiring to attend this interesting function whether ex-service men or not, are welcome. An interesting program following the dinner has been arranged.

PROGRAM

"The Duties of the Post and District Surgeons of the Medical Commission of the American Legion."

E. Ralph May, Department Surgeon, Department of Illinois, Chester.

"Veterans' Legislation as It Affects the Medical Profession."

R. L. Sensenich, Member of the Legislative Committee on Veterans' Affairs, American Medical Association; President, Indiana State Medical Association, South Bend, Indiana.

"The Mission of the American Legion."

J. Bernard Murphy, Commander, American Legion, Department of Illinois, Bloomington.

THE STAG

When? Tuesday Evening, May 19, 1936 at 9:00 o'clock.

Place? Ball Room of the Abraham Lincoln Hotel.

Nature? A good evening's entertainment—refreshments and an excellent opportunity to renew old friendships.

The cost? Admission by ticket only, the tickets presented at the registration booth to all men who register—and it is free.

FOR MEN ONLY!—DO NOT FORGET THE STAG.

ALUMNI AND FRATERNITY LUNCHEONS

All alumni and Fraternity luncheons held during the 1936 annual meeting are scheduled for Wednesday noon. Complete information concerning these luncheons may be found on the bulletin boards, or procured at the registration and information booth.

GOLF ENTHUSIASTS

Golfing medicos attending the annual meeting will have the exceptional opportunity of playing on the beautiful eighteen hole Illini Country Club Course, and for their benefit there will be held a handicap tournament on Tuesday morning, with suitable prizes, and luncheon served at noon.

Foursomes and twosomes from various cities will contest and the committee in charge will gladly arrange a game for those golfers who are alone.

Any information desired relative to golfing or these matches can be procured from members of the golf committee, or Dr. Fred P. Cowdin, chairman, who will be on hand.

MEETINGS OF THE HOUSE OF DELEGATES

Tuesday Afternoon, May 19, 1936

Ladies Parlor

3:00—First Meeting of the House of Delegates, called to order by the President, Charles B. Reed, for Reports of Officers, Councilors, Committees, introduction of resolutions, and for the transaction of other

business which may come before the House.

Thursday Morning, May 21, 1936

Ladies Parlor

8:30—Second Meeting of the House of Delegates, called to order by the President, for the election of officers, councilors, committees and delegates and alternates to the American Medical Association. Reports of Resolution Committee and action on same, and for the transaction of other business that may come before the House.

SECRETARIES' CONFERENCE

C. D. Snively, *Chairman*.....Ipava
Donald W. Killinger, *Vice-chairman*.....Joliet
John W. Long, *Secretary*.....Robinson

Tuesday Morning, May 19, 1936

9:00-12:00—

Call to Order and opening remarks—C. D. Snively, Ipava.

Remarks by Charles B. Reed, President, Illinois State Medical Society, Chicago; and Rolland L. Green, President-Elect, Illinois State Medical Society, Peoria.

"Some Achievements of the Medical Relief Plan in Illinois." Mr. H. P. Scott, Director of Medical and Dental Service, Illinois Emergency Relief Commission, Chicago.

Discussion opened by J. S. Templeton, Councilor, Tenth District, Pinckneyville.

"What County Secretaries Can Do for Organized Medicine," Charles S. Skaggs, Councilor-at-large, East St. Louis.

Discussion opened by John R. Neal, Chairman, Legislative Committee, Springfield.

"Medical Economics—A Specialty." A M. Mitchell, Chairman, Committee on Secretaries' Conference for Indiana, and Secretary Vigo (Indiana) County Medical Society, Terre Haute, Indiana.

Discussion opened by H. N. Rafferty, Past President and Secretary, Aesculapian Society of the Wabash Valley, Robinson.

Question and Answer Period for County Society Secretaries.

Annual Election of Officers of Secretaries' Conferencec.

PEDIATRICIANS' MEETING

John R. Vonachen, *Chairman*.....Peoria
Arthur H. Parmelee, *Vice-Chairman*..Oak Park
Joseph K. Calvin, *Secretary*.....Chicago

Tuesday Morning, May 19, 1936

Columbus Hall

9:00-12:00—

"Congenital Pylorospasm."—Orville Barbour, Peoria.

A report of ten years clinical study of various methods of treatment of congenital pylorospasm, including a review of the comparative effects of atrophine, phenobarbital and irradiation. There follows favorable observations made during the past five years with the use of whole suprarenal gland and thyroid therapy in 54 cases of this clinical condition. The type of feeding which seems more desirable is then discussed.

Discussion opened by G. L. Kaufman, Chicago; and Ray Armstrong, Champaign.

"Physical Impairments of Deaf Children," George L. Drennan, Jacksonville.

This paper is a resume of physical findings of a group of deaf children who have entered school this year. The first part is given over to a brief discussion of the causes of deafness. The discussion of the physical impairments forms the basis of the paper. The high percentage of grave physical defects other than deafness prompted this report. There is a discussion of the prevention of deafness and physical impairments. This section of the paper is largely given over to preventive measures.

Discussion opened by Robert Cook, Springfield.

"Some of the More Serious Conditions Encountered in the Newborn," Arthur Parmelee, Chicago.

A discussion of the etiology, symptoms and treatment of the more serious pathologic conditions encountered in the new-born. Special emphasis on the respiratory and circulatory disturbances, intracranial birth injuries and prematurity. A discussion of symptoms and signs which will aid in the early recognition of serious conditions together with practical suggestions concerning prevention and treatment.

Discussion opened by Sam Hoffman, Chicago; and W. L. Crawford, Rockford.

"Recent Advances in Therapeutic Procedures in Pediatrics," Julius H. Hess, Chicago.

Veinoclysis (lantern slides).

Blood transfusion—Strauss technique, Spivak technique.

Administration of intra-peritoneal fluids.

Wangensteen suction apparatus in intestinal obstruction.

Trocar method operation for emypema and thoractomy.

Method operation for empyema—Bettman.

Irrigation apparatus for after treatment of empyema.

Strapping of umbilical hernia.

Inguinal hernia—Home made truss for very small infants.

Spinal puncture in small infants—Glaser.
Cisternal, jugular and longtitudinal puncture.
Pyloric stenosis operative procedure.
Discussion opened by John F. Carey, Joliet; and O. E. Ehrhardt, Springfield.
"Breast Feeding." Round Table Discussion, 11:30 A. M. Clifford Grulee, Chicago, Presiding.
"Statistical Review of the Situation." Clifford Grulee, Chicago.
"Relation to Supplementary Feeding in the Newborn." Henry Poncher, Chicago.
"Public Health Point of View." Henry Niblack, Chicago.
"From the Standpoint of Practice." Gerald Cline, Bloomington.

PEDIATRICS PAPERS IN SCIENTIFIC PROGRAMS

Tuesday, May 19, 2:30 P. M.

SECTION ON RADIOLOGY

Dr. John A. Bigler, Highland Park. "Interpretation of Hilus Shadows in Chest X-Rays of Children."
Discussion by D. O. N. Lindberg, Decatur; and Joseph K. Calvin, Chicago.

Tuesday, May 19, 2:30 P. M.

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. Winston Tucker, Springfield, "Treatment of Meningococcic Meningitis with Meningococcus Antitoxin."
Discussion by Thomas D. Masters, Springfield.

Tuesday, May 19, 3:00 P. M.

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. Paul H. Harmon, Chicago; and Dr. H. N. Harkins, Chicago. "Occurrence of Vercidal Substances in Patients with Poliomyelitis: Bearing on Serum Treatment and Vaccination."
Discussion by H. J. Shaughnessy, Springfield.

Tuesday, May 19, 3:30 P. M.

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. Sidney O. Levinson, Chicago. "A Five Year Review of Anterior Poliomyelitis in the Chicago Area."
Discussion by Julius Hess, Chicago.

Tuesday, May 19, 4:00 P. M.

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. Scott Wilkinson, Decatur. "Epidemic Respiratory Diseases in Early Life."
Discussion by J. Howard Beard, Urbana.

Tuesday, May 19, 4:30 P. M.

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. Maurice L. Blatt, Chicago. "Cross Infection—Its Prevention in a Children's Hospital."
Discussion by Archibald Hoyne, Chicago.

Tuesday, May 19, 5:00 P. M.

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. Henry C. Niblack, Chicago, "How to Reduce Infant Mortality."
Discussion by John Carey, Joliet.

Wednesday, May 20, 9:30 A. M.

SECTION ON EYE, EAR, NOSE AND THROAT

Dr. J. Bellows, Chicago, "Treatment of Ophthalmia Neonatorum."
Discussion by Harry O. Williams, Centralia; Wm. R. Fringer, Rockford; Jos. F. Duane, Peoria.

Wednesday, May 20, 2:30 P. M.

SECTION ON SURGERY

Dr. Herman L. Kretschmer, Chicago. "Renal Tuberculosis in Childhood and Adolescence."
Discussion by Frank N. Evans, Springfield.

Wednesday, May 20, 4:50 P. M.

SECTION ON MEDICINE

Dr. Lee Frech, Decatur, "Present Status of Immunization Against Contagious Diseases."
Discussion by John R. Vonachen, Peoria.

Wednesday, May 20, 5:00 P. M.

SECTION ON EYE, EAR, NOSE AND THROAT

Dr. J. R. Lindsay, Chicago. "Chronic Sinus Disease in Children."
Discussion by Theo. E. Walsh, Chicago; Louis Ostrum, Rock Island; Thomas C. Galloway, Evanston.

OBSTETRICIANS' AND GYNECOLOGISTS' MEETING

W. M. Cooley, *Chairman*.....Peoria
Ralph A. Reis, *Secretary*.....Chicago

Tuesday Morning, May 19, 1936

Library

9:00—"Sarcoma of the Uterus."
Wm. T. Carlisle, Chicago.

A survey is presented on the literature of Sarcomata of the Uterus with an intimate review of the cases at St. Luke's Hospital in the past five years. A pathological classification is advanced with a lantern slide demonstration depicting the gross and histological types.

The salient features of this series have been summarized with especial reference made to the etiological considerations, the presenting symptoms, the physical and operative findings, the various operative procedures, the type of tumor and radiation factor, and the prognosis. The outstanding conclusion deduced is the high frequency of error made not only in the preoperative diagnosis, but in the operative diagnosis and the pathological diagnosis as well.

The difficulty in recognition of this condition is evidenced and the reasons pointed out, but the suggestion is made that, although infrequent, these sarcoma should be considered in the differential diagnosis of uterine tumors.

Discussion opened by Richard K. Collins, Aurora.

9:30—"Gyneplastic and Minor Operations Immediately Following Delivery." O. H. Crist, Danville.

Need of repair operations following delivery. Opposition of early teaching to this procedure. Some pioneers in this work. Technique of operations. Brief summary of 71 cases.

Discussion opened by Frank F. Maple, Chicago.

10:00—"Medical Disorders in Pregnancy—(and their effect upon Labor)." William B. Serbin, Chicago.

Heretofore, certain medical disorders have been regarded as factors complicating pregnancy, the latter being looked upon as a primary disorder and the disease as secondary. At the present time, this concept has been reversed. Obviously, in such disorders as cardiac, thyroid and chronic renal disease, diabetes, tuberculosis, the anemias and others, with pregnancy superposed, the medical aspects of the case are of primary importance and the obstetric aspects secondary. This does not imply that the pregnancy is of little or no consequence, but treatment is first directed toward the primary medical requirements of the case and the course of the pregnancy observed in accordance with the patient's response as well as effect on her general health. Cases are cited to show that intelligent medical management not only assures a more successful outcome with reference to pregnancy alone but that the general health is likewise improved, whenever the internist's cooperation is desirable.

Discussed opened by Charles C. Rentfro, Chicago.

10:30—"Endometriosis." W. A. Malcolm, Peoria.

Endometriomata are tumors arising in or near the female pelvis. They are composed of tissue resembling endometrium which is made up of glandular tissue with typical stroma and round cell infiltration. This tumor menstruates, enlarges slowly, invades tissue progressively, is curable and is not malignant, and after the menopause or castration, retrogresses and atrophies. This is the only tumor that has a definite cure by removal of the ovarian hormone.

The history and literature of endometriomata are reviewed. The various theories developed to explain the occurrence of these tumors are discussed. Their location, pathology and symptomatology are described. The treatment is outlined, emphasis being laid on the relationship between their occurrence and the menstrual life of the patient.

Discussion opened by D. D. Smith, Decatur.

11:00—"The Treatment of Antepartum Hemorrhage." M. Edward Davis, Chicago.

Hemorrhage in pregnancy is always a serious symtom indicative of serious pathologic complications. It is one of the major causes for maternal morbidity and mortality. During the first trimester of pregnancy abortion and ectopic gestation are the most common causes for bleeding. Hemorrhage rarely occurs during the middle trimester. In the last trimester placenta praevia and abruptio placentae are the most important etiologic causes. Good results depend on an accurate diagnosis, careful preparation of the patient and individualized treatment. Broad principles of treatment can be laid down to guide this individualized treatment. These principles in use at the Chicago Lying-in Hospital have done much to improve our results in the treatment of these complications.

Discussion opened by Floyd L. Heinemeyer, Rockford.

11:30—"Postpartum Hemorrhage in Outpatient Obstetrics." Henry Buxbaum, Chicago; and I. C. Udesky, Chicago.

This article deals with 455 cases of post-partum hemorrhage occurring in 10,651 consecutive deliveries conducted in the home by the Chicago Maternity Center.

In this analysis is shown the relative importance of such factors as parity, multiple pregnancies, operative interference, prolonged labors, size of foetus and management of third stage of labor in relation to the incidence of post-partum hemorrhage.

The management of post-partum hemorrhage in the home is discussed.

12:00—"The Early Diagnosis of Cancer of the Cervix." Charles E. Galloway, Evanston.

A few slides compiled by Dr. Galloway, together with slides from Schiller, will be shown. A study of Cervical Carcinoma in Evanston and material relative to tristratification of portio epithelium preceding or associated with carcinoma will be discussed.

Discussion opened by F. R. Towner, Elgin.

Women Physicians' Meeting

The women physicians of Illinois, all of whom are members of the Illinois State Medical Society, will hold their special meeting on Tuesday morning, May 19, 1936.

9:30—Breakfast at the Leland Hotel.

The program will be devoted to the subject of Maternity and Infant Hygiene. Dr. Carolyn MacDonald will give an address on Syphilis—a problem in prenatal care.

Dr. Bertha VanHoosen will talk on plans for Maternal Mortality Studies which are to be made by women physicians in many countries throughout the world to be presented at the International Meeting in Edinburgh in 1937.

A beautifully illustrated lecture which has

been prepared by Dr. VanHoosen from the Century of Progress exhibit on Maternity Hygiene will be presented. This lecture is designed for public education and women doctors will find it suitable for their talks before Women's Clubs, Parent-Teacher Associations and all civic groups.

All women doctors are urged to attend this session to meet old friends and enjoy this special occasion as well as the regular sessions of the Illinois State Medical Society for the following three days.

Dr. Elizabeth B. Ball, President of the Medical Women of Illinois, will officiate at this meeting.

Fracture Demonstrations

Drs. Philip H. Kreuscher and George Staben, of the Fracture Committee, are arranging to have fracture demonstrations at the meeting similar to those conducted over a period of several years at the annual meeting.

The demonstrations will be given on Tuesday morning, and at other hours during the meeting so that they will not interfere with the regular programs. A complete schedule of these demonstrations will be posted at the registration booth, and will be announced during the meeting.

The following have been invited to participate in these demonstrations:

F. N. Cloyd.....Danville
Harold A. Vonachen.....Peoria
J. H. Finch.....Champaign
J. B. Moore.....Benton
F. J. Otis.....Moline
J. S. Bell.....Hoopeston
R. J. Mroz.....Rockford
George Apfelbach .....Chicago
Jas. J. Callahan.....Chicago
Arthur Conley .....Chicago
Daniel Levinthal .....Chicago
Frank Murphy .....Chicago
E. J. Berkheiser.....Chicago

Complete details will be announced at the meeting.

SCIENTIFIC EXHIBITS

Knights of Columbus Club

MAIN FLOOR LOBBY

Booth A. "Medical Economics."
Bureau of Medical Economics, American Medical Association.
A series of posters and charts showing the distribution of physicians, and University and College Student Health Activities.

Booth B. "Statistical Studies."
Illinois Department of Public Health, Springfield, Illinois.
Graphical illustrations with units showing trends of mortality and morbidity with age and geographical distribution concerning,
(a) All death causes
(b) All notifiable diseases
(c) Heart and cancer
(d) Measles, whooping cough, diphtheria and scarlet fever

Booth C. "Health and Educational Exhibit."
Illinois State Planning Commission, Robert Kingery, Chairman. Henry L. Kellogg, State Planning Engineer.
The exhibit illustrating population trends, density and income, committments to penal and insane institutions, morbidity and mortality from certain communicable diseases, heart disease and cancer. Other interesting charts illustrating many prevalent economic conditions in Illinois.

Booth D. "The Medical Library."
Sangamon County Medical Society, Springfield, Illinois.
Showing how a county medical society can conduct its own library, selected volumes from the medical library maintained by the Sangamon County Medical Society with placards demonstrating the organization, economic management and advantages of this useful function of a County Medical Society.

STAGE

Booth E. "Demonstration of Collapse Therapy in Pulmonary Tuberculosis."
Chicago Municipal Tuberculosis Sanitarium, Chicago, Illinois.
A series of X-Ray pictures showing the lungs before and after collapse therapy. The various procedures to collapse the diseased lungs are shown graphically.

Booth F-G. "Electrosurgical Obliteration of the Gall Bladder."
Max Thorek, Surgical Service—Cook County and American Hospitals, Chicago, Illinois.
A series of 155 consecutive cases where electrosurgical obliteration of the gall bladder was done is shown graphically, with technique of the procedure, information concerning the cases, and the accumulated statistics shown by graphs, radiograms and motion pictures.

Booth H. "Clinical and Experimental Studies in Cerebrospinal Fluids."
Abraham Levinson and David S. Cohn, Chicago, Illinois.
Simple quantitative method for determin-

ing of dextrose in cerebrospinal fluid. Comparative value of lumbar and cisternal fluids in the diagnosis of meningitis. Enzymes in cerebrospinal fluid.

Booth I. "Indications for Peroral Endoscopy."
Paul H. Holinger, Bronchoscopic Clinics of Research and Educational Hospital, University of Illinois, St. Luke's Hospital and Children's Memorial Hospital, Chicago, Ill.
X-Ray films of cases in which the diagnosis or treatment was carried out endoscopically. Bronchoscopes and esophagoscopes mounted in a lighted cabinet giving the endoscopic views of the pathology seen in these cases. Informative charts showing the problem of the foreign body.

Booth J. "Neuropsychiatric Relationships to General Medicine."
Groves Blake Smith, Godfrey, Illinois.
An exhibit prepared for the Section on Nervous and Mental diseases, of the American Medical Association, representing a typical analysis and relationships of the psychoneuroses as well as comprehensive relationships of the neuropsychiatric aspects of general medicine, emphasizing its community relationships.

Booth V. "Cutaneous Manifestations of Syphilis."
Clark W. Finnerud, Representative for the Scientific Exhibit Committee of the Section on Dermatology and Syphilology of the American Medical Association, Rush Medical College of the University of Chicago, Chicago, Illinois.
A photographic demonstration of practically all of the clinical cutaneous manifestations of congenital and acquired syphilis assembled from the collections of a number of dermatologists. Transparencies will illustrate the pathologic changes of the disease in its various forms in the skin.

MAIN EXHIBITION HALL

Booth K. "Constitution and Cancer."
American Society for the Control of Cancer, New York City. Arthur H. Estabrook.
An interesting exhibit of charts and living material in the shape of mice to show the constitutional factors in the production of cancer in animals.

Booth L. "Radium and Radium Therapy."
Frank E. Simpson, Frank E. Simpson Institute of Radium Therapy, Chicago, Ill.
Model of radon machine showing method of extracting radon gas from a solution of radium. Diagrams explaining operation of radon machine, radium bearing ores, tubes, tube holders, applicators, and instruments. Photographs and diagrams illustrating various phases of the handling of radium.

Booth M. "Electric Stethoscope and Stethograph."
Joseph K. Narat, Chicago, Illinois.
A new apparatus for the amplification of heart sounds. Headphones allow auscultation while a registering apparatus allows recording of heart sounds. The curve therefore is seen and written at the same time. No photographic camera is necessary with this apparatus.

Booth N. "Radiographic Study of Anatomy."
Harold O. Mahoney, Northwestern University Medical School, Chicago, Illinois.
A radiographic study has been made of the actions of the body, transverse, coronal and sagittal. Advantages of this type of study thoroughly explained, as it permits a thorough study of the section without disturbing or destroying it.

Booth O. "Effect of Metabolic Disturbances of Teeth."
I. Schour and A. G. Brodie, University of Illinois College of Dentistry, Chicago, Ill.
An exhibit of photomicrographs, charts and roentgenograms showing the effects of various metabolic disturbances on teeth.

Booth P. "Edema and Blood Pressure as Influenced by Minerals."
M. Herbert Barker, Renal Clinic, Northwestern University Medical School, Chicago, Illinois.
A series of charts. Edema of renal diseases have been studied under controlled metabolic conditions. The influence of individual basic and acid ions on the edema is recorded and graphed. Simultaneous observations of the mineral effect upon blood pressure and rental function is presented.

Booth Q. "The Infant's Stool."
Jesse R. Gerstley, Katharine M. Howell and David J. Cohn, Michael Reese Hospital, Chicago, Illinois.
Microscopic slides, drawings and charts as well as models of stools; demonstrating the effect upon fecal flora and fecal acidity of different types of diet and formulas used in infant feeding.

Booth R. "Permanent Identification of the New Born."
Gilbert P. Pond, West Suburban Hospital, Oak Park, Illinois.
Technique of obtaining infant palm prints. Charts illustrating an original classification of the papillary ridge patterns of the palm. Filing of classified cards for ready reference.

Booth S. "The Pigmentations of the Skin, Including Neoplasms."
S. William Becker, Section of Dermatology, University of Chicago, Chicago, Illinois.
Photographs of clinical cases, microscopic drawings, photomicrographs and charts

outlining fundamental principles of normal and pathologic pigmentation.

Booth T. "Sweat: Physiological and Biochemical Studies."
Theodore Cornbleet, E. R. Pace and H. C. Schorr, University of Illinois Medical School, Chicago, Illinois.
Analyses of sweat from normal persons and those with certain skin disorders will be compared, and the difference shown. An exposition will be made of how the sweat as a reducing agent conditions the skin surface.

Booth U. "Tumors of the Skin."
Erwin P. Zeisler, Northwestern University Medical School, Chicago, Illinois.
Sixty clinical photographs mostly in color exhibiting the principal gross and histologic varieties of cutaneous neoplasms has been arranged to assist the general practitioners in the recognition of the commoner and some of the rarer tumors of the skin, both benign and malignant.

Booth W. "Vitamin C: Cevitamic Acid."
Arthur F. Abt, Northwestern University Medical School, Chicago, Illinois.
The metabolism of Cevitamic Acid in infants and children. A series of charts showing normal values for cevitamic acid (reduced) in the blood plasma of infants and children from birth to 13 years. Demonstrations of microchemical technique and capillary fragility apparatus.

Booth X. "The Incidence of Arterosclerosis."
N. S. Davis, III, Department of Pathology, Northwestern University Medical School, Chicago, Illinois.
Charts illustrating the gross and age incidence of arteriosclerosis of the aorta and coronary arteries and arteriosclerotic scars of the myocardium and kidneys, coronary thrombosis, arteriosclerotic changes in the kidneys, cerebral hemorrhage and thrombosis.

Booth Y. "Diabetic Coma, Its Prevention and Treatment."
R. T. Woodyatt, Chicago, Illinois.
Charts illustrating methods for the prevention and treatment of diabetic coma.

Booth Z. "Glands of Internal Secretion."
W. O. Thompson, Arthur Dean Bevan, N. J. Heckel, P. K. Thompson and S. G. Taylor, III, Rush Medical College: Presbyterian and Cook County Hospitals, Chicago, Illinois.
A series of charts and photographs covering recent original work on the pathological physiology of the thyroid; the pituitary gland, the nature of Addison's Disease and its treatment with an active adrenal cortex extract; a consideration of the gonads and other endocrine glands.

Booth AA. "The Diagnosis and Management of Upper Abdominal Problems."
J. Donald Milligan, Pelton Clinic, Elgin, Illinois.
This exhibit will present at least four upper abdominal problems plus a miscellaneous group of interesting cases. The four problems will be gastric ulcer, duodenal ulcer, gastric cancer and small bowel obstruction. Several interesting cases of other types will also be presented.

Booth BB. "First Aid in Eye Injuries."
Thomas D. Allen and Glenway W. Nethercut, Illinois Eye and Ear Infirmary, Chicago, Illinois.
Models, charts, photographs, etc., picturing various types of eye injuries, and the methods of providing proper first aid attention for them.

ROOM OFF MAIN EXHIBITION HALL

Booth CC. "Pathology of Amebiasis."
R. H. Jaffe, Department of Pathology, Cook County Hosptal and Cook County Graduate School of Medicine, Chicago, Illinois.
The exhibit is planned to consist of museum specimens showing the different forms of lesions that occur in the intestinal tract and in the liver in infections with entamoeba histologica. Other types of ulcerative lesions occurring in the intestine will be shown for comparative purposes.

Booth DD. "The Nephrotic State."
Harold C. Lueth, Department of Medicine, University of Illinois College of Medicine, Chicago, Illinois.
Drawings and diagrams showing the clinical syndrome, gross specimen photomicrographs, outline of treatment, etc. Illustration showing the altered physiology and the mechanism of edema.

Booth EE. "Carcinoma of Colon and Rectum."
M. H. Streicher, University of Illinois College of Medicine, Chicago, Illinois.
Drawings and diagrams showing the entire clinical course of the disease, gross specimens, photomicrographs, x-ray demonstration of various clinical types, and outline of acceptable treatment.

Booth FF-GG. "Treatment of Pneumonia."
Robert W. Keeton, University of Illinois College of Medicine, Chicago, Illinois; Ford K. Hick, Chicago, Illinois.
Demonstration of Neufold technique of typing pneumonia; problems in feeding the pneumonia patient; the use of the nasal catheter to administer oxygen, with demonstration of the apparatus, and a motion picture showing the proper placing of the catheter will be a part of the

exhibit. Competent demonstrators will be on hand to show these interesting features.

ADJOINING CHECK ROOM

Booth II. "U. S. P., N. F., and N. N. R. Preparations."
Illinois Pharmaceutical Association. H. H. Zorn, Pres. I. Ph. A. O. U. Sisson, Chairman U. S. P. and N. F. Committee.
This exhibit consists of preparations from the New United States Pharmacopea XI, and National Formulary VI, which becomes official June 1, 1936. There are about fifty 12-ounce bottles properly labeled.

Booth HH. "The Leucopenic Index in Allergy."
Michael Zeller, M. D., Chicago, Illinois.
This exhibit consists of a series of charts defining leucopenic index, illustrating the various types of leucocytic responses to food and inhalant allergens, illustrations of the value of the method in allergy, a new aid in the diagnosis of allergy.

Booth JJ. "Interesting Bone Lesions."
L. M. Hilt, Radiologist, and F. W. Light, Pathologist, St. John's Hospital (Clinical Laboratory), Springfield, Illinois.
Shows several x-ray films of interest, and some rather rare lesions of bone.

WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

OFFICERS

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President-Elect—Mrs. F. P. Hammond.....Chicago
First Vice President—Mrs. A. B. Middleton....Pontiac
Second Vice President—Mrs. N. M. Percy....Chicago
Third Vice President—Mrs. A. H. Brumback..Chicago
Treasurer—Mrs. William Raim .....Chicago
Corresponding Secretary..Mrs. Harold M. Camp.....
..... Monmouth
Recording Secretary—Mrs. I. L. Foulton.....
.....East St. Louis

COUNCILORS

Mrs. Imas Rice .....First District
Mrs. E. E. Beatty .....Second District
Mrs. Lucius Cole .....Third District
Mrs. E. J. Meyer .....Third District
Mrs. Carl Hedberg .....Third District
Mrs. F. E. Bollaert .....Fourth District
Mrs. J. E. Reisch .....Fifth District
..... Sixth District
Mrs. Thomas D. Laney .....Seventh District
Mrs. E. S. Allen .....Eighth District
Mrs. E. W. Burroughs .....Ninth District
Mrs. R. F. Stanton .....Tenth District
Mrs. E. R. Steen .....Eleventh District

CHAIRMEN OF STANDING COMMITTEES

Organization .....Mrs. A. B. Middleton
Press and Publicity .....Mrs. P. R. Blodgett
Legislative .....Mrs. Carl Bartling
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Program .....Mrs. A. G. Aschauer
Convention .....Mrs. David H. McCarthy
Revisions .....Mrs. M. L. Hole
Public Relations .....Mrs. John A. Wolfer
Credentials and Registration .....Mrs. J. P. Simonds
Hygeia .....Mrs. H. B. Henkel
Finance .....Mrs. F. P. Hammond
Archives .....Mrs. Frank L. Alford
Hostess .....Mrs. A. H. Brumback
Chaplain .....Mrs. J. P. Simonds

PROGRAM

Monday, May 18, 1936

1:00—Registration.

Tuesday, May 19, 1936

10:00—Board Meeting, Abraham Lincoln Hotel.
11:30—Conference of members with the following State Chairmen: Legislative, Hygeia, Public Relations, Organization of Committees.
12:00—Luncheon, Public Relations—Abraham Lincoln Hotel.
4:00 to 5:30—Tea at the Executive Mansion.
7:00—Bridge Dinner, St. Nicholas Hotel. Mrs. W. D. Chapman, presiding.

Wednesday, May 20, 1936

8:00—Board Breakfast, Abraham Lincoln Hotel.
9:30—Business Session and Memorial Service.
1:00—President's and Past President's Luncheon (Mrs. W. D. Chapman, presiding). Introduction of the incoming president, Mrs. F. P. Hammond, and of the newly elected officers of the Illinois State Board Woman's Auxiliary.
Visitors will please register for one of the following tours at 3:30 P. M.

1. Drive over the Vachel Lindsay Nature Trail on Lake Springfield with lectures and explanations by Rev. George M. Link, Nature Lecturer and official guide.
2. A tour of state and biologic laboratories allowing one hour for each laboratory.
3. A tour of Abraham Lincoln's residence, tomb and state Historical Library.

These tours will all be taken at 3:30 P. M.
7:00—President's dinner and dance, Abraham Lincoln Hotel.

Thursday, May 21, 1936

9:00—Post Convention Board Meeting, Abraham Lincoln Hotel.

GENERAL SESSIONS

OPENING MEETING

Tuesday Afternoon, May 19, 1936

COLUMBUS HALL

1:00—Eighty-Sixth Annual Meeting of the Illinois State Medical Society officially opened by the President, Chas. B. Reed, Chicago.

1. Invocation—Rev. Jerry Wallace, Pastor, Christ Episcopal Church, Springfield.
2. Address of Welcome—Hon. John W. Kapp, Mayor of Springfield.

3. Address of Welcome—George Staben, Springfield, President Sangamon County Medical Society.

4. Report of Chairman, Committee on Arrangements—R. F. Herndon, Springfield.

5. Adjournment for Oration in Medicine.

1:30—Oration in Medicine.

"The Career of a Heart," Ralph A. Kinsella, St. Louis, Missouri. (By invitation.)

Wednesday Morning, May 20, 1936

11:00—Oration in Surgery—"A Critical Review of 822 Operations on the Adrenal-Sympathetic System with Special Reference to Essential Hypertension," George Crile, Cleveland, Ohio. (By invitation.)

Wednesday Afternoon, May 20, 1936

1:30—President's Address—Charles B. Reed, President, Illinois State Medical Society, Chicago.

Thursday Morning, May 21, 1936

Induction of the President-Elect.

Immediately following the close of the last meeting of the House of Delegates, Dr. Rolland L. Green will be inducted into the office of President of the Illinois State Medical Society, by the retiring President.

Section Programs

SECTION ON MEDICINE

George Parker.....*Chairman*
James G. Carr.....*Secretary*

Tuesday Afternoon, May 19, 1936

COLUMBUS HALL

2:30—"Low Dosage Irradiation of the Pituitary and Adrenals for Treatment of Non-Nephritic Hypertension."—James H. Hutton, Chicago.

This work, now in progress more than three years, based on the theory that most cases of essential hypertension are due to functional abnormality of the pituitary and adrenals and that this abnormality can be corrected in part by irradiation of these two organs with very small doses of the x-ray. Evidence and experimental work are summarized. Technique of treatment. Results—reduction in blood pressure, relief of symptoms and certain other phenomena. Statistics—our own and those of other men. Conclusions.

Discussion opened by Hermon H. Cole, Springfield.

2:50—"Miners' Hand—A Vasospastic Disease of the Hands of Miners Due to Vibration."—C. H. Drenckhahn, Urbana.

This syndrome is not infrequent in miners. It consists of a numbness and a dull aching sensation in the hands. Vasospastic phenomena can be demonstrated. Arteriograms will be shown. Miners experience considerable vibration in the hands while handling their picks, and undoubtedly this is the etiologic factor. This syndrome has never before been described in miners, although a similar syndrome has been described in pneumatic hammer workers and shoe factory workers. Therapy is discussed. Because coal mining is such an important industry in Illinois this syndrome warrants description before the Medical Society.

Discussion opened by Harold Voris, Chicago.

3:10—"The Medical Significance of Unrecognized Perforated Peptic Ulcer."—Harry A. Singer, Chicago.

It is generally assumed that the symptoms of perforated peptic ulcer are remarkably uniform and that the diagnosis therefore entails no difficulty. A comprehensive clinical and reentgenologic study indicates however, that a considerable percentage of ruptured ulcers do not present the classical picture and as a result are usually misdiagnosed. The failure to recognize atypical perforation explains many apparent clinical mysteries encountered by medical men.

Discussion opened by J. Donald Milligan, Elgin.

3:30—"Ketosis in the Treatment of Epilepsy—Effects of Diacetone Alcohol on Institutional Epileptics."—Isidore Finkelman, Elgin, W. Mary Stephens, Louis B. Shapiro, and DeLester Sackett.

In order to determine whether the acetone bodies developed in the course of the ketogenic diet are the factors that inhibit epileptic convulsions, we treated eleven institutional epileptic patients with diacetone alcohol. The anticonvulsant properties of this drug were demonstrated by the experiments of Keith. Two to six drams of the drug were given daily during two periods of treatment. The first period was from forty to fifty days and the last period was fifty days. There was an intervening period of twenty-five days during which no medication was given. It was found that diacetone alcohol was not anticonvulsant in institutional epileptics. A discussion of the probable mode of action of the ketogenic diet is given.

Discussion opened by T. T. Stone, Chicago.

3:50—"Acute Coronary Occlusion: Points on Diagnosis and Treatment."—Harry A. Richter, Wilmette.

An arbitrary division of the patients according to their predominating symptoms is an aid to diagnosis, and a careful history, supplemented by serial four-lead electrocardiograms, often makes the diagnosis clear. Three case histories illustrating the so-called "silent" group are given in abstract.

A short film of the changes noted in serial four-lead electrocardiograms will be shown, and the importance of the prolonged period of absolute bed rest stressed.

Discussion opened by James A. Walsh, Peoria.

4:10—"Pneumothorax Treatments for Outpatients."—Fred M. Meixner, Peoria.

Pneumothorax treatments are simple. Indications and contraindications. Use in cases of early or minimal tuberculosis. Supplants institutional care in selected cases. Should be available to hospital, home and office patients. Uses in bronchiectasis. Typical case reports.

Discussion opened by Alen H. Hruby, Chicago.

4:30—"Various Activities of the Beating Heart."—Emmet Keating, Chicago.

If health is to be maintained, the rhythm of the heart must be maintained. Interference with common physical laws that have to do with the work of the heart disturbs rhythm.

Heart symptoms are not always indicative of heart disease.

A good history and detailed physical examination. Fluroscopic study at different angles determines number of films for visual record. Electrocardiogram. Urine and blood examination. All of these are necessary.

Discussion opened by Warren Pearce, Quincy.

Wednesday Morning, May 20, 1936

COLUMBUS HALL

Joint Session with Sections on Surgery and Public Health and Hygiene.

SYMPOSIUM ON AMEBIASIS

8:30—"Contagion and Public Health Aspect of Amebiasis."—Mr. Joel I. Connolly, Chicago.

This paper will give a brief summary of the findings in the outbreak of epidemic amebic dysentery having a focus in two Chicago hotels in 1933.

The reasons for believing that contamination of water through faulty plumbing was the principal cause of the outbreak will be presented, and the specific defects and methods of correction will be given. The lessons resulting from the epidemic, which are generally applicable, will be summarized.

Illustrative material will be used if possible.

Discussion opened by Clarence W. Klassen, Springfield.

8:50—"The Clinical Aspects of Amebiasis."—Samuel E. Munson, Springfield.

1. Blood may or may not be found in the stools, depending on the acute or chronic types.
2. Discomfort and pain in lower abdomen.
3. Poor appetite.
4. Leukocytes increased.
5. Where blood is not observed in the stools, occult blood is found.
6. Slides showing types of organism and effect on the tissues.

9:10—"The Laboratory Diagnosis of Amebiasis."—Bertha Kaplan Spector, Chicago.

9:30—"The Medical Management of Amebiasis."—Arthur E. Mahle, Chicago.

9:50—"Surgical Problems in Amebiasis."—Gatewood, Chicago.

Discussion of the surgical pathology involved in Amebiasis.

Disease is primarily medical. Surgery is limited to complications. The following complications are discussed:

1. Liver abscess with
   a. subphrenic involvement,
   b. empyema,
   c. lung involvement.
2. Involvement of cecum and appendix.
3. Neoplasm-like masses of the large bowel.
4. Perforations of the bowel with local or general peritonitis.
5. Affections of the skin.
   a. about enterostomy stomata,
   b. about the rectum.
6. Cerebral abscess.

The importance of accurate differential diagnosis and the avoidance of surgery in acute amebic dysentery is discussed.

10:10—Opening Discussion (Pathological).—R. H. Jaffe, Chicago.

10:25—Public Health Discussion.—Mr. Clarence W. Klossen, Springfield.

10:30—Medical Discussion.—E. F. Traut, Chicago.

10:35—Closing Discussions.

Wednesday Afternoon, May 20, 1936

COLUMBUS HALL

2:30—Chairman's Address:—"Problems Encountered in the Interpretation of Mechanical and Laboratory Aids to Diagnosis."—George Parker, Peoria.

2:50—"The Estimation of Liver Function in Hepatic Disease."—Edmund F. Foley, Chicago.

This paper will give a brief summary of the recognized functions of the liver. It will also consider the alterations of these functions as seen in disease and discuss the tests used for recognition of alterations of function. The diagnostic and prognostic value of these tests will then be given.

Discussion opened by Harold C. Ochsner, Waukegan.

3:10—"The Recrudescence of Malaria."—Tom Kirkwood, Lawrenceville.

The mosquito which transmits malaria is found in all parts of Illinois. Many inhabitants of certain parts of this state are carriers of this disease. The introduction of one of these carriers into what is considered a non-malarial region may easily lead to an outbreak of malarial fever. Hard roads, with consequent increase in travel, and shifts in population due to economic factors, are conducive to the dissemination of carriers and the spread of the disease.

Instead of having disappeared, malaria is on the increase in Illinois, and may be a menace in any part of the state.

Discussion opened by Leroy H. Sloan, Chicago.

3:30—"Infectious Mononucleosis."—Harry J. Isaacs, Chicago.

The typical and atypical symptoms and findings of infectious mononucleosis are mentioned with the differential diagnosis. The disease is easily confused with acute Leukemia, Influenza, Tuberculosis, Hodgkins, acute abdominal conditions, and those conditions associated with Jaundice, and prolonged causes of temperature. The value of the Heterophilic agglutination test as a specific test for the disease is stated; also the differentiation between serum sickness and the above. A brief review of the literature is presented with a report of three cases.

Discussion opened by Warner H. Newcomb, Jacksonville.

3:50—"Some Unusual Features of Lung Cancer."—Cecil M. Jack, Decatur.

Early diagnosis is important in cancer in general, but in cancer of the lung it is of paramount importance for even the slightest progress to be made. Considering the recent progress in thoracic surgery, it falls upon the clinicians to present the surgeons with operable cases. Among the problems that present themselves in the early diagnosis of lung cancer, that of differentiating metastatic from primary tumors has not received the attention it deserves. The present discussion is limited to this problem.

Discussion opened by Harry Magee, Peoria.

4:10—"A New Electric Stethoscope and Stethograph."—Joseph K. Narat, Chicago.

Rationale of sound recording.

Brief historical review of devices for registration of sounds.

Description of the new apparatus, which allows: 1. simultaneous auscultation of amplified sounds by several individuals; 2. visualization of the enlarged tracings on a screen; 3. simultaneous recording of heart sounds and arterial or venous pressure, without the use of a photographic camera and dark room.

Discussion opened by E. M. Stevenson, Bloomington.

4:30—"Skin Manifestations of Drug Intoxications."—Wm. J. Morginson, Springfield.

A description of the immediate and remote objective symptoms which may be a manifestation of dermatitis medicamentosa or drug intoxications with suggestions and procedures recommended for the avoidance of these eruptions. The drugs considered are those commonly prescribed, as arsenic, quinine, barbiturates, bromides, iodides, phenolphthalein, mercury, bismuth, etc.

Discussion opened by J. M. McCuskey, Peoria.

4:50—"Present Status of Immunization against Contagious Diseases."—Lee Frech, Decatur.

Any discussion of immunization would be amiss without a review of the factors of immunity. This paper deals with the various agents advocated for creating an artificial immunity; the phases of different types of immunity; and the importance of immunity upon the happiness of the individual and the welfare of the community.

Discussion opened by John R. Vonachen, Peoria.

Thursday Morning, May 21, 1936

COLUMBUS HALL

Joint Session with Sections on Surgery; Eye, Ear, Nose and Throat; Public Health and Hygiene; and Radiology

SYMPOSIUM ON VASCULAR DISEASES

8:30—"Etiology and Public Health Aspects of Vascular Disease."—C. Elliott Bell, Decatur.

Heart diseases are divided into etiological groups. The clinical importance and the public health problems connected with each group are discussed.

8:50—"Ocular Findings in Vascular Disease." Kathryn Chapman, Chicago.

Changes in eyegrounds in vascular disease. The fundus in hypertension, arteriosclerosis and nephritis. How the oculist can help the internist. Vascular accidents in the eye.

9:10—"Vertigo as a Syndrome in Vascular Disease."—S. L. Shapiro, Chicago.

For the physician, vertigo may be defined as any subjective sensation of an abnormal character in which the patient feels himself to be in motion or feels that a portion or all of his surroundings are moving.

The sensation closely associated with the labyrinth and the cortical area corresponding to it has been shown by recent experiments to be adjacent to the end-station for audition.

Vertigo may be produced by a variety of factors, many seemingly entirely unrelated to each other; the reason for this is the great sensitivity of the vestibular centers and tracts in the brain stem to toxic conditions and their even greater sensitivity to vascular abnormalities. Differential diagnosis as the cause, includes two conditions, which must never be lost sight of when the

internist is attempting to diagnose or treat a case of vertigo presumably on a vascular basis; chronic ear infections, particularly with cholesteatoma, which may and often do exist unknown to the patient; and other diseases of the brain notably brain tumors and brain abscess.

The treatment includes the management of the primary vascular factor together with certain drugs which may be used to lower the sensitivity of the vestibular centers.

9:30—"The Diagnosis of Peripheral Vascular Disease."—George W. Scupham, Chicago.

9:50—"Cerebral Vascular Disease."—E. W. Cannady, East St. Louis.

This discussion of cerebral vascular disease will be confined to the vasospastic phenomena, cerebral arteriosclerosis and syphilitic endarteritis. The vasospastic phenomena are found in lead encephalopathy. Raymond's disease, and hypertensive encephalopathy. The clinical features, pathology and treatment of cases of hypertensive encephalopathy observed in the medical wards of the Barnes Hospital, St. Louis, and the Peter Bent Brigham Hospital, Boston, will be reported. The diagnosis of those types of cerebral vascular accidents due to arteriosclerosis and syphilitic endarteritis will be discussed briefly.

10:10—"Rentgenologic Aspect of Vascular Disease."—E. R. Crowder, Evanston.

A description of a new instrument used in studying the heart and great vessels, with suggestions as to practical application in the diagnosis and treatment of cardiac and vascular disease.

10:30—"The Surgical Management of Peripheral Vascular Disease."—Leo Zimmerman, Chicago.

Vascular diseases of interest to the surgeon are confined largely to those of the extremities, and include disturbances of the veins as well as the arteries. Venous lesions include varicosities and the different forms of thrombosis and phlebitis. The significance and treatment of these various types will be discussed. The most frequently encountered arterial lesions are arteriosclerosis, thrombo-angiitis obliterations and Raynaud's disease. Treatment varies with the amount of vascular spasm present. The indications for treatment and the management of these lesions in their various stages will be presented.

10:50—Opening Discussion, Medical—Ford K. Hick, Chicago.

11:00—Opening Discussion, Surgical—C. B. Ripley, Galesburg.

11:10—Opening Discussion, Eye, Ear, Nose and Throat—George H. Woodruff, Joliet.

11:20—Closing Discussions.

Section on Surgery

John A. Wolfer.....*Chairman*

C. Paul White.....*Secretary*

Tuesday Afternoon, May 19, 1936

COMMUNITY HALL

2:30—"Correlation of Clinical Treatment of Burns—With Recent Experimental Studies."—Henry N. Harkins, Chicago.

A study of a series of burned patients is presented with the results of various methods of treatment, especially the use of tannic acid. Clinical observations on blood concentration and fluid loss from the weeping burned surfaces and the possible effect of tannic acid in preventing these changes are discussed. A case of curling ulcer is reported in some detail. The relation of fluid loss from burned areas in patients to a somewhat similar loss in experimental animals is analyzed. The pathology of burns including local destructive changes and generalized so-called "toxic" changes is mentioned. A final brief comment is included on the relaxation of early choice of treatment and later skin grafting or plastic repair.

Discussion opened by D. J. Lewis, Springfield.

3:00—"Carcinoma of the Colon."—D. B. Freeman, Moline.

Since there is no specific test or strictly pathognomonic symptoms of carcinoma of the colon, it is necessary to consider those signs and symptons which present themselves in this condition and then by such methods of examination as are available, make a diagnosis and decide what procedure should be used to eradicate this disease.

Discussion opened by O. E. Nadeau, Chicago.

3:30—"Surgical Treatment of Arthritis."—Philip H. Kreuscher, Chicago.

Every case of acute arthritis should be managed surgically. The removal of foci of infection nearly always demands surgery. Deformities can be prevented in many instances and, when they exist, can be corrected. Tenotomies, capsulotomies, capsulorrhaphies and osteotomies are indicated in some cases. Arthritis of the spine demands immobilization with or without traction and often internal fixation by one of the several fusion methods. Surgery is recommended early in those persistent cases of low back or sacroiliac arthritis, especially in industrial cases. Manipulation of the joints under anesthesia with or without injection of various materials has a definite place in the management of the subacute or well established cases. Synovectomies are indicated especially in monarticular arthritis of larger joints. Arthroplasty is done in suitable cases, especially of the knee and elbow. All the rehabilitation methods at the command of the surgeon must be employed.

Discussion opened by G. W. Staben, Springfield.

THE TREATMENT OF FRACTURES OF THE NECK OF THE FEMUR

4:00—"The Roger Anderson Method."—H. D. Junkin, Paris.

Reference briefly is made to the current literature on hip fracture. The Roger Anderson Well-Leg Splint was used in thirty-eight hip fractures. Fifteen were intracapsular and twenty-three involved the intertrochanteric area. Six deaths occurred in this series. All cases living through the first year after injury recovered with bony union and excellent function. A brief summary of the advantages of the splint is made.

4:20—"The Steel Pin Method."—H. A. Sofield, Chicago.

A presentation of the method and an analysis of the results of using steel pins for fixation of fractures of the femoral neck. A series of more than 40 cases, encompassing a period of 2½ years, submitted. Lantern slides show the method employed and the results obtained. Freedom of movement in the knee joint and ease of changing position of the patient, combined with rigid immobilization of the fracture is stressed.

4:40—"The Whitman Method."—H. E. Cooper, Peoria.

The three factors which Whitman regarded as essential in the reduction and fixation of fractures of the hip will be discussed. If these three factors, that is, hyperextension, internal rotation and abduction, are essential, the question comes up whether the other methods in use of reducing and holding fractures of the hip will bring about the best combination of conditions to be most conducive to a good solid union in fractures of the hip. In my opinion the use of the Whitman's Spica in these fractures offers the best hope of a solid bony union.

5:00—Opening Discussion.—Paul B. Magnuson, Chicago.

5:10—Discussion.—J. B. Oliver, Kewanee.

Wednesday Morning, May 20, 1936

COLUMBUS HALL

Joint Session with Sections on Medicine and Public Health and Hygiene.

SYMPOSIUM ON AMEBIASIS

8:30—"Contagion and Public Health Aspect of Amebiasis."—Mr. Joel I. Connolly, Chicago.

This paper will give a brief summary of the findings in the outbreak of epidemic amebic dysentery having a focus in two Chicago hotels in 1933.

The reasons for believing that contamination of water through faulty plumbing was the principal cause of the outbreak will be presented, and the specific defects and methods of correction will be given. The lessons resulting from the epidemic, which are generally applicable, will be summarized.

Illustrative material will be used if possible.

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5. Where blood is not observed in the stools, occult blood is found.
6. Slides showing types of organism and effect on the tissues.

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9:30—"The Medical Management of Amebiasis."—Arthur E. Mahle, Chicago.

9:50—"Surgical Problems in Amebiasis."—Gatewood, Chicago.

Discussion of the surgical pathology involved in amebiasis.

Disease is primarily medical. Surgery is limited to complications. The following complications are discussed:

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   a. subphrenic involvement,
   b. empyema,
   c. lung involvement.
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   a. about enterostomy stomata,
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The importance of accurate differential diagnosis and the avoidance of surgery in acute amebic dysentery is discussed.

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10:25—Public Health Discussion.—Mr. Clarence W. Klossen, Springfield.

10:30—Medical Discussion.—R. F. Traut, Chicago.

10:35—Closing Discussions.

Wednesday Afternoon, May 20, 1936

COMMUNITY HALL

2:30—Renal Tuberculosis in Childhood and Adolescence."—Herman L. Kretchmer, Chicago.

The paper will stress the frequency of renal tuberculosis in childhood and adolescence; the importance of early diagnosis and early treatment; and analysis of a group of adult cases in which the symptoms can be traced back to childhood or adolescence; a critical review of a large series of cases; the importance of determining the cause and origin of pus in the urine. Illustrated by lantern slides.

Discussion opened by Frank N. Evans.

3:00—"A Method of Performing Nephrostomy and Its Valve."—Wilbur W. Holland, Beardstown.

The operation is commonly applied to patients for whom the element of time is important. By this method a catheter can be introduced into the kidney pelvis accurately, with a minimum amount of damage to the parenchyma. It can be introduced without mobilization of the kidney and the danger of bleeding is very slight. It maintains its position in the pelvis and can be readily changed.

3:30—"The Injection Treatment of Hernia." W. W. McMillan, Chicago.

After a historical background of this method is given a report is submitted covering an experience of about three years with the Injection Treatment of Hernia. This includes clinical and experimental data, the latter on experimental animals. An investigation of various solutions is also included, the objective being to use a solution which will produce a healing over of the hernial defect by new fibrous tissue without necrosis, while the hernia is held reduced by a truss. Hazards, contra indications and results with recurrent rate, as compared with surgical care, is reported, with a concluding evaluation of this treatment.

Discussion opened by D. R. Cunningham, Evanston.

4:00—"Causes of Failure in the Treatment of Acute Empyema."—J. R. Head, Chicago.

A discussion is presented of the various methods of treating acute empyema and of the causes for immediate failure and for the development of chronic empyema and of the later complications. The points brought up are illustrated by case reports and x-rays. Particular attention is given to the relative indications for open and closed methods.

Discussion opened by R. M. Sutton, Peoria.

4:30—"Cirrhosis of the Liver as a Surgical Problem."—Gustav Zechel, Chicago.

A short review of symptoms and complications of the cirrhosis of the liver is given and supported by the study of 77 cases of the Research Hospital, 30 cases of the Ravenswood Hospital and 6 cases of the author. The importance of the misleading character of the initial symptoms is explained under the heading of differential diagnosis. Only the early diagnosis gives a good surgical prognosis. Since the number of cases observed by each author is quite limited, the surgical results of Talma's operation, collected from about 150 authors, are computed and critically discussed. Conclusions from the above obtained material are drawn as directions for the general surgeon.

Discussion opened by Warren Cole, St. Louis, Mo.

5:00—"Surgery of the Gallbladder and Bile Ducts."—C. B. Puestow, Chicago.

A series of 200 consecutive operations performed for benign biliary tract disease were analyzed relative to mortality, morbidity and end results. Included in this group were 40 patients in whom the common bile duct was explored and drained. Studies were carried out on the intraductal pressures of these patients under various conditions and were correlated with other experimental data in an effort to determine why physiologic changes are associated with or follow biliary tract disease and cholecystectomy. A small number of cases of acute cholecystitis were included in this series and their surgical treatment discussed.

Discussion opened by J. C. T. Rogers, Urbana.

Thursday Morning, May 21, 1936

COLUMBUS HALL

Joint Session with Sections on Medicine, Eye, Ear, Nose and Throat, Public Health and Hygiene and Radiology. For Program see Section on Medicine.

SECTION ON EYE, EAR, NOSE AND THROAT

Watson W. Gailey ..... *Chairman*
John A. Cavanaugh..... *Secretary*

Tuesday Morning, May 19, 1936

LADIES PARLOR

11:00—"Notes on Plastic Surgery of the Orbit." (Slides)—M. L. Folk, Chicago.

The most important principles of plastic surgery about the eye and orbit, the pre- and post-operative treatment and the operative technique will be discussed. Cases illustrated by lantern slides and showing cicatricial ectropion, congenital and acquired colobomata, and congenital pigmented nevi of the lids, symblepharon, entropion, exophthalmos, and restoration of shrunken eye sockets, will be presented.

Discussion opened by Frank N. Davenport, Moline; John F. Deal, Springfield; J. S. Clark, Freeport.

11:20—"Injuries to the Esophagus."—Chas. D. Sneller, Peoria.

The esophagus is the passageway taken by all foods from the mouth to the stomach. Chemical, thermal and physical injury to this tube may take place from the accidental swallowing of materials, considered as improper foods, or from unskillful instrumentation. This may lead to abrasion, laceration or perforation of the esophagus. The mucosa itself has remarkable resisting and healing powers, but the submucosa and deeper structures are poorly equipped to withstand the onslaught of injury and bacterial invasion. Various factors are concerned in the better understanding and treatment of injuries to this organ.

Discussion opened by Wm. A. McNichols, Dixon; Harold Watkins, Bloomington; Paul Holinger, Chicago.

11:40—"Surgical Treatment of Retinal Detachment."—S. J. Meyer, Chicago.

Popularization of the surgical treatment of Retinal Detachment began in 1929 following a paper describing technique and end results in a series of 100 cases by Jules Gonin. Gonin was first to elaborate upon the

use of the Pacquelin cautery to seal up retinal tears. Then followed the use of diathermy for superficial cauterization of the sclera by means of a ball electrode as advocated by Lansen. Guist later published his results with potassium hydroxide cauterization of the choroid through a trephine aperture in the sclera. About the same time Wese began to advocate his method of multiple punctures of the sclera with the long flexible steel needle with 50 to 75 milliamperes of diathermy current. The Safar and Walker methods of diathermy treatment followed shortly thereafter. In October, 1935, Dr. Harry S. Gradle published an article in the American Journal of Ophthalmology, advocating the use of a single, rather firm and moderately curved diathermy needle in place of the thin flexible Wese needle or the cumbersome Walker pins. With this simple, non-flexible needle, any number of punctures can be made, it becomes rarely necessary to sever any recti muscle for adequate exposure, and the entire technique is simplified and shortened."

Discussion opened by Harry W. Woodruff, Joliet; Chas. V. Voight, Mattoon; A. L. Adams, Jacksonville.

Tuesday Afternoon, May 19, 1936

ST. JOHN'S HOSPITAL

2:30—Conference Groups. — Present Your Problems.

Pharynx and Larynx:

Morphology. (Applied surgical anatomy).—problems in diagnosis and treatment. (Slides and specimens).

Francis L. Lederer; L. Z. Fishman; Paul Holinger; N. D. Fabricant; Illinois University.

Ear:

Diagnosis and Treatment of Ear Conditions.

Ellison L. Ross; Howard C. Ballenger; Northwestern University.

Nose:

Anatomy: Diagnosis and Treatment of the Paranasal Sinuses and More Common Nasal Diseases.

D. B. Hayden; L. W. Curry, Richard Watkins; Geo. E. Shambaugh; Frank Wojniak, Rush Medical College.

Eye:

Diagnosis and Treatment of Trachoma.—Hallard Beard, University of Illinois.

Classification of Concomitant Squint with Reference to Treatment.—Geo. Guibor, Northwestern University.

Retinal Detachment as a Surgical Condition.—Sanford Gifford, Northwestern University.

Obstetrical Ophthalmology. — Dewey Katz, Rush Medical College.

Safety Measures Intra-ocular Surgery. —Wm. F. Moncrieff, Rush Medical College.

Wednesday Morning, May 20, 1936

LADIES PARLOR

9:00—"Use of Obturator in Treatment of Chronic Antrum Infections." — G. C. Otrich, Belleville.

In the surgical treatment of chronic infection of the antrum or maxillary sinus, the radical Caldwell Luc or one of its many modifications is supposed to be the last word. Even after these radical antral-nasal operations, we still have with us the patient with the chronic antrum and it is for this type of case that I have used the obturator with most satisfactory results and it is for this reason that I am recommending it.

Discussion opened by O. E. Van Alyea, Chicago; Jesse H. Roth, Kankakee; R. C. Matheny, Galesburg.

9:30—"Treatment of Ophthalmia Neonatorum."—J. Bellows, Chicago.

Eighty-five cases of ophthalmia neonatorum were treated at the Cook County Hospital in the past three years. The routine treatment consists of frequent saline irrigations. Freshly boiled milk, cooled to body temperature is given intramuscularly every other day, in all but the very mild cases. Various antiseptics were tried.

Discussion opened by Harry O. Williams, Centralia; Wm. R. Fringer, Rockford; Jos. F. Duane, Peoria.

10:00—"Practical Points in Hearing Tests and Selection of Hearing Aids." — Robt. Sonnenschein, Chicago.

Functional testing of hearing may be carried out with proper use of the voice, a small number of good forks, and correlation of findings, with the history of the patient and examination of ear, nose and throat. Audiometers are also of great value in many instances, and especially for research purposes.

Discussion opened by H. L. Ford, Champaign; Wm. H. Elmer, Rockford; J. J. Theobald, Oak Park.

10:30—"Treatment of Trachoma in Southern Illinois."—A. F. Lenzen, Peru.

One thousand cases of trachoma were treated. Two main methods of treatment were used and compared. Other methods of treatment will be considered. Five hundred operations were performed. Surgical procedures will be described, and prophylaxis will be considered.

Discussion opened by E. E. Woodside, Marion; Elias Selinger, Chicago; Dwight C. Orcutt, Chicago.

10:45—Chairman's Address. — Watson W. Gailey, Bloomington.

Wednesday Afternoon, May 20, 1936

LADIES PARLOR

2:30—"Allergy of the Eye, Ear, Nose and Throat."—Leon Unger, Chicago.

Allergy may strike almost any part of the body. It has special predilection for the nose and eyes; ears are occasionally involved. Discussion of allergic conjunctivitis, rhinitis, hay fever, Meniere's syndrome, angio-neurotic edema. Treatment, specific and non-specific.

Discussion opened by G. S. Duntley, Macomb; A. R. Hollender, Chicago; Lawrence J. Hughes, Elgin.

3:00—"Middle Ear Infections."—C. H. Christoph, Chicago.

After a brief review of the anatomic pathologic relation, the treatment of chronic discharging ears is given consisting mainly of dry treatment, gauze, wicks of Xeroform and instillation of Sulzberger Iodine powder after removal of polypi and granulation in the ear and pathologic condition in the nose and throat.

Discussion opened by Walter Stevenson, Quincy; Harry C. Hill, Streator; Samuel Salinger, Chicago.

3:30—"Physical Therapy as Applied to the Eye, Ear, Nose and Throat."—J. S. Coulter, Chicago.

Physiologic effects of radiant energy (infra-red and ultra-violet radiation) galvanic currents (ionization) and medical diathermy. (long and short wave) Indications for the use of above in eye, ear, nose and throat conditions.

Discussion opened by A. B. Middleton, Pontiac; Maurice H. Cottle, Chicago; Louis L. Steiner, Danville.

4:00—"Practical Consideration of Petrositis with Report of Two Cases."—Jos. C. Beck, and M. R. Guttman, Chicago.

This paper will deal with a brief résumè on the subject of Petrositis and a report of two cases operated upon, illustrating various details in the clinical course, pathology and operative procedures.

Discussion opened by C. F. McClellan, Decatur; Wm. E. Hagens. Chicago; Stuart Broadwell, Springfield.

4:30—"A Comparison of Scopolamine and Atropin Cycloplegia."—Louis Bothman. Chicago.

Two hundred eyes were examined by retinoscopy while under the cycloplegic effect of scopolamine, using a one-half per cent solution of Scopolamine, Hydrochloride instilled twice, at one-half hour intervals and the same eyes re-examined while under the influence of fourteen drops of atropine instilled q. i. d.

Discussion opened by R. H. Woods, LaSalle; F. W. Broderick, Sterling; E. C. Spitze, East St. Louis.

5:00—"Chronic Sinus Disease in Children."—J. R. Lindsay, Chicago.

A discussion of practical problems in the management of chronic sinus disease in the child, from the rhinologist's standpoint, based on a review of the cases treated in the University of Chicago clinics during the past eight years.

Discussion opened by Theo. E. Walsh, Chicago; Louis Ostrum, Rock Island; Thomas C. Galloway, Evanston.

Thursday Morning May 21, 1936

COLUMBUS HALL

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene and Radiology. For Program see Section on Medicine.

Section on Public Health and Hygiene

W. M. Talbert .....*Chairman*
Archibald Hoyne .....*Secretary*

Tuesday Afternoon, May 19, 1936

GYMNASIUM

2:30—"Treatment of Meningococcic Meningitis with Meningococcus Antitoxin."—Winston Tucker, State Health Department, Springfield.

Since February 1, 1935, fifty-eight cases of meningococcic meningitis have been hospitalized in the St. John's Hospital unit for contagious diseases in Springfield. Of this number, 40 were from the City of Springfield, while the remaining 18 were from nearby communities. In addition to the clinical diagnosis, stained smears of the spinal fluid were prepared in each instance, and the diagnosis corroborated by the finding of meningococci in the smears. The first 16 cases were treated with antimeningococcus serum, but in spite of this treatment nine of the patients succumbed, which is a fatality rate of 56 per cent. During the latter part of March, 1935, meningococcus antitoxin was placed on the market, and this preparation has been used in the treatment of all subsequent cases of meningococcic meningitis in this hospital. Forty-two cases have been treated with this preparation, generally by the intravenous route, the antitoxin being diluted in twice the quantity of 10 per cent glucose solution. Death took

place in 9 of the 42 patients, a fatality rate of 22 per cent. An analysis of this group of cases will be presented, with particular reference to the interval of time which elapsed between the onset of symptoms and the administration of meningococcus antitoxin.

Discussion opened by Thomas D. Masters, Springfield.

3:00—"Occurrence of Vercidal Substances in Patients with Poliomyelitis: Bearing on Serum Treatment and Vaccination."—Paul H. Harmon, and H. N. Harkins, Chicago.

The recent attempts at vaccination against poliomyelitis, together with the irregular appearances of neutralizing substances in the blood after an attack of poliomyelitis have prompted us to extend our original studies concerning the poliocidal substances in human serums, made in 1928 and 1929. At that time, the authors (in collaboration with Drs. H. J. Shaughnessy and F. B. Gordon) found neutralizing substances in a large number of normal persons, both adults and children. Limited observations upon the age incidence suggested the possibility of acquisition of these substances with increasing age. We have titrated recently monkey serums at frequent intervals following experimental poliomyelitis and determined the exact appearance time of the poliocidal substance. We have likewise titrated the serums of humans at all stages during early poliomyelitis and those of the same patients three and four months after the acute attack. We find that clinical poliomyelitis occurs when poliocidal substances are already present in the blood. An almost universal presence of these substances very early in the disease, so early that they could not possibly be due to the current attack, suggest that the poliocidal substances have less to do with resistance and recovery in this disease than was formerly supposed. For example, in our series of fourteen serums, there are patients with little or no poliocidal substance that suffer only a light attack of the disease. It is quite noticeable that no patients with adequate initial amounts of poliocidal substance has had widespread paralysis. The general aspects of poliomyelitis immunity are discussed in relation to artificial immunity (vaccination) and to natural immunity.

Discussion opened by H. J. Shaughnessy, Springfield.

3:30—"A Five Year Review of Anterior Poliomyelitis in the Chicago Area."—Sidney O. Levinson, Chicago.

All preparalytic and early paralytic patients in the Chicago area during the years 1931 to 1935, inclusive, were treated with relatively large doses of convalescent poliomyelitis serum. Although there has been no epidemic during this time, cases have occurred endemically every year during the summer and fall seasons.

In the preparalytic group, a review shows that the mortality has been very low, and the incidence of paralysis almost negligible. Most of the weaknesses that appeared have been temporary and have cleared up within a short period after the illness. No severe degree of paralysis has supervened in those preparalytic cases who were treated with adequate doses of serum. In the early paralytic group, who were suffering from the active disease and in whom the paralysis seemed to be spreading, the results of serum therapy are difficult to evaluate. In general, the clinical impression has been that most of the patients have shown cessation of illness and some recovery from the paralysis.

Discussion opened by Julius Hess, Chicago.

4:00—"Epidemic Respiratory Diseases in Early Life."—Scott Wilkinson, Decatur.

A clinical study of epidemic respiratory disease in infants and young children for the years 1931 to 1935, inclusive. An analysis of relative frequency as compared to certain common contagious diseases; the involvement of specific age periods; relation to influenza and other epidemics; the clinical features in early life. Comments on the interpretation of these findings from the epidemological viewpoint.

Discussion opened by J. Howard Beard, Urbana.

4:30—"Cross Infection: Its Prevention in a Children's Hospital."—Maurice L. Blatt, Chicago.

The control of cross-infection is dependent upon

(a) The recognition and exclusion from the institution of contagious diseases in the pre-dromal, early and convalescent stages and when full blown.

(b) The recognition of carriers on admission.

(c) The giving of whole human blood to all new admits.

(d) If contagious case occurs in the institution, its isolation and the immediate immunization of susceptible contacts.

(e) Institution of specific therapy.

Discussion opened by Archibald Hoyne, Chicago.

5:00—"How to Reduce Infant Mortality."—Henry C. Niblack, Board of Health, Chicago.

The principal causes of infant mortality can still be classified into three groups: conditions peculiar to early infancy, respiratory, and gastro-intestinal diseases. The marked lowering of the infant mortality rate in some communities has been due principally to reducing the number of deaths from gastro-intestinal diseases. Future efforts must be directed toward reducing the deaths in the other two groups. A discussion of some of the measures along the above lines that are being carried out in a large metropolitan community.

Discussion opened by John Carey, Joliet.

Wednesday Morning, May 20, 1936

COLUMBUS HALL

Joint Session with Sections on Medicine and Surgery.

SYMPOSIUM ON AMEBIASIS

8:30—"Contagion and Public Health Aspect of Amebiasis."—Mr. Joel I. Connolly, Chicago.

This paper will give a brief summary of the findings in the outbreak of epidemic amebic dysentery having a focus in two Chicago hotels in 1933.

The reasons for believing that contamination of water through faulty plumbing was the principal cause of the outbreak will be presented, and the specific defects and methods of correction will be given. The lessons resulting from the epidemic, which are generally applicable, will be summarized.

Illustrative material will be used if possible.

Discussion opened by Clarence W. Klassen, Springfield.

8:50—"The Clinical Aspects of Amebiasis."—Samuel E. Munson, Springfield.

1. Blood may or may not be found in the stools, depending on the acute or chronic types.
2. Discomfort and pain in lower abdomen.
3. Poor appetite.
4. Leukocytes increased.
5. Where blood is not observed in the stools, occult blood is found.
6. Slides showing types of organism and effect on the tissues.

9:10—"The Laboratory Diagnosis of Amebiasis."—Bertha Kaplan Spector, Chicago.

9:30—"The Medical Management of Amebiasis."—Arthur E. Mahle, Chicago.

9:50—"Surgical Problems in Amebiasis."—Gatewood, Chicago.

Discussion of the surgical pathology involved in amebiasis.

Disease is primarily medical. Surgery is limited to complications. The following complications are discussed:

1. Liver abscess with
   a. subphrenic involvement,
   b. empyema,
   c. lung involvement.
2. Involvement of cecum and appendix.
3. Neoplasm-like masses of the large bowel.
4. Perforations of the bowel with local or general peritonitis.
5. Affections of the skin.
   a. about enterostomy stomata,
   b. about the rectum.
6. Cerebral abscess.

The importance of accurate differential diagnosis and the avoidance of surgery in acute amebic dysentery is discussed.

10:10—Opening Discussion (Pathological)—R. H. Jaffe, Chicago.

10:25—Public Health Discussion.—Mr. Clarence W. Klassen, Springfield.

10:30—Medical Discussion.—E. F. Traut, Chicago.

10:35—Closing Discussions.

Wednesday Afternoon, May 20, 1936

GYMNASIUM

2:30—"The Incidence and Clinical Significance of the Various Types of the Diphtheria Bacillus Found in Illinois."—Thomas C. Grubb, and H. J. Shaughnessy, Springfield.

In 1931 Anderson and his co-workers in Leeds, England, announced that all strains of the diphtheria bacillus could be divided into three distinct types—gravis, mitis and intermediate—based on their colonial morphology on a chocolate-tellurite agar medium. They stated further that the gravis strains were associated with the more severe, toxic cases of diphtheria, while the mitis strains were usually isolated from the mild cases. In general, Anderson's original findings have been amply confirmed by subsequent studies in England.

In order to determine the incidence of the three types in this state, positive diphtheria cultures coming to the laboratories of the State Department of Public Health during the past six months have been grown on Anderson's chocolate-tellurite agar medium for the purpose of classifying the strains as gravis, mitis, etc. A small percentage of the culture has also been examined for virulence and starch fermentation. The clinical significance of the three types was determined by sending questionnaires to the physicians who had submitted the positive cultures. Information regarding the location of the false membrane, type of the disease, amount of antitoxin injected, response to the antitoxin, etc., was requested in order to ascertain the relative severity of the case. The above data have been tabulated and correlated.

Discussion opened by Perry J. Melnick, Decatur.

3:00—"Public Health Problems of Southern Illinois."—B. E. Montgomery, Harrisburg.

Communicable diseases result in substantially greater proportionate losses in southern Illinois than in either the central or northern sections of the State. Statistical data are presented which show that losses in the southern area from typhoid fever, infantile diarrhea, diphtheria, tuberculosis and whooping cough amount to 450 lives per year more than would be the case if mortality rates were no higher than elsewhere in the State. The excess infant mortality is about 250 deaths annually. The cause of these excess losses is a lack of organized official public health facilities rather than racial characteristics, the quality of medical service or

climate. Supportive evidence on these points is presented. A plan for improving the situation is offered.

Discussion opened by John J. McShane, Springfield.

3:30—"The Etiologic Diagnostic and Medico-legal Problems of Occupational Diseases."—C. O. Sappington, Chicago.

Silicosis has made the general population occupational-disease-conscious, but there are other important occupational diseases deserving of serious consideration.

Etiology has been a most neglected factor. Mere industrial exposure does not constitute a hazard. Industrial conditions must be critically studied and measured before correct diagnosis can be made. This does not mean reliance upon unproved statements in the history of the patient.

Diagnosis involves not only adequate examinations, but also appropriate clinical laboratory and x-ray data, as well as differential opinion. Pre-employment and periodic examinations are real diagnostic problems.

The chief medico-legal issues arise because of deficiency in etiologic information, and consequent errors in diagnosis. The medical profession must extend its influence and basic knowledge in occupational disease work if usefulness is to be continued and preserved.

Discussion opened by Wm. D. McNally, Chicago and Vernon Long, Decatur.

4:10—"Basic Principles in the Treatment of Acute Gonorrhea."—Leon M. Beilin, Chicago.

We are handicapped in our study of pathology and therapy of gonorrheal infection mainly on account of inability to reproduce this disease in lower animals and to develop an active immunity against this infection. Basic principles in the treatment of acute gonorrhea are summed up in the promotion of effective drainage through active diuresis, observation of rigid hygiene, etc. To be effective, the treatment must be continuous and measures taken to counteract the disease must at all times be appropriate for each succeeding stage in the inflammatory reaction of the tissues to the gonococcal invasion. After all, we are merely trying to assist Nature and not setting out to perform miracles with an imposing array of drugs.

Discussion opened by H. J. Burstein, Decatur.

4:40—"Effectiveness of the Oral Administration of Ephedrine in the Common Cold."—G. Howard Gowen and Alexander J. Nedzel, Chicago.

The treatment of acute coryza has been most diverse. To date there are no specific biological or pharmaceutical agents. Diehl's preparation of "papavarine and codeine" seems quite effective, but is too narcotic, and it is not unreasonable to suppose that the chief motive action of this treatment is that the patient does not care whether he has coryza or not, having been rendered less alert to his distress by having been made somewhat 'dopey." Considering that most cases of coryza are fundamentally of an allergic nature, we decided to experiment with an ephedrine preparation which has been successfully employed in some cases of Hay Fever, Asthma and other allergic states. As ephedrine has a tendency to cause psychic excitation, most especially insomnia, it seemed rational to combine it with a sedative such as an isoamylethylbarbituric acid.

Discussion opened by E. F. Pearson, Springfield and Lloyd Arnold, Chicago.

Thursday Morning, May 21, 1936

COLUMBUS HALL

Joint Session with Sections on Medicine, Surgery, Eye, Ear, Nose and Throat and Radiology. For Program see Section on Medicine.

SECTION ON RADIOLOGY

George M. Landau .....*Chairman*
Roswell T. Pettit.....*Secretary*

Tuesday Afternoon, May 19, 1936

LIBRARY

2:30—"Interpretation of Hilus Shadows in Chest X-rays of Children."—John Bilger, Highland Park.

Structures making up hilar shadows, as check on findings at necropsy with x-rays. Films will be shown demonstrating normal hilus, hilar tuberculosis, pneumonia, Hodgkin's disease and other pathological conditions.

Discussion opened by D. O. N. Lindberg, Decatur and Joseph K. Calvin, Chicago.

3:00—"Renal and Ureteral Anomalies."—Wm. W. Furey, Chicago.

Renal and ureteral anomalies have proven of great interest. Congenital anomalies constitute 40% of all pathologic conditions of the kidney and ureter, hence the necessity of recognizing them as something more than curiosities. Complete urologic and urographic examinations are essential.

Discussion opened by Arthur Sprenger, Peoria and E. L. Jenkinson, Chicago.

3:30—"Radiological Diagnosis and Treatment of Prostatic Lesions."—Perry B. Goodwin, Peoria.

Radiological evidence as produced by film study using an opaque medium and the results obtained from Roentgentherapy in cases of carcinoma of the prostate.

Discussion opened by H. B. Henkel, Springfield.

4:00—"Irradiation Therapy of Intracranial Neoplasms."—T. J. Wachowski, and Adolf Hartung, Chicago.

This paper reviews the history of irradiation therapy of intracranial neoplasms. The dangers are pointed out and indications for treatment, based on histological and clinical studies, are presented. Fifteen cases of verified brain tumors treated by irradiation are presented.

Discussion opened by Eric Oldberg, Chicago.

4:30—"Intrapelvic Protrusion of the Acetabulum (Otto's Pelvis)."—Lawrence M. Hilt, Springfield.

Report of three cases (one was treated as a fracture for over two months). Approximately seventy cases of Otto's Pelvis have been reported in the literature, although first described by Otto in 1824.

Discussion opened by F. Flinn, Decatur and C. H. Zoller, Litchfield.

5:00—"Neuroblastoma from the Standpoint of the Roentgenologist."—Edwin L. Rypins, Bloomington.

A brief description of the pathology is to be given and three cases of the Hutchinson type are presented, giving characteristic Roentgen ray findings and microscopic sections and one case that was treated with x-ray. The Roentgenologist can make a definite diagnosis, even though the pathologist cannot be sure.

Discussion opened by Cesare Gianturco, Urbana.

Wednesday Morning. May 20, 1936

LIBRARY

8:30—"The Radiologist and the Hospital."—W. M. Hartman, Macomb.

Is Radiology the practice of medicine or glorified hospital technical service? What is hospital service and what is medical service? Radiology, because of recent development, has been subjected to much economic strain. Responsibility of hospital staff. Solution lies with general medical profession.

Discussion opened by Everett Coleman, Canton and Perry Goodwin, Peoria.

9:00—"Chest Roentgenography: New Standards and Improved Techniques."—D. O. N. Lindberg, Decatur.

The criteria of adequacy of chest Roentgenograms necessary to exclude demonstrable lesions is defined. Basic standards of technique to provide satisfactory films are discussed and indications for use of higher milliamperages, high speed Bucky and tubes with rotating anodes are presented.

Discussion opened by Roswell T. Pettit, Ottawa and Willard Van Hazel, Chicago.

9:30—"Roentgen Therapy of Cellulitis."—B. C. Cushway, and Roe J. Maier, Chicago.

Presentation of sixy cases of Cellulitis with discussion of present day conception of biological action of Roentgen radiation in this disease. Description of local and systemic reaction is given. Cooperation in treatment between attending physician and Roentgenologist is emphasized.

Discussion opened by I. S. Trostler and Paul G. Papsdorf, Chicago.

10:00—Report of Cancer Committee of the Illinois State Medical Society.

Bowman C. Crowell, *Chairman,* Chicago.
E. G. C. Williams, Danville.
Milton G. Bohrod, Peoria.
J. P. Simonds, Chicago.
R. H. Jaffe, Chicago.

10:30—"Comparative Value of Various Methods in the Roentgenological Examination of the Colon."—Cesare Gianturco, Urbana.

Various methods used in Roentgenological examination of colon are described and compared as to their value. Special consideration is given to the fluoroscopic examination to the double contrast technique and to the use of semi-transparent media.

Discussion opened by B. Orndoff and Max Hubeny, Chicago.

Wednesday Afternoon, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"The Principles of Radium Therapy."—Frank E. Simpson, Chicago.

Effects of radium rays on living tissues. The selective effects of radium instead of the caustic effects should be used wherever possible. The undesirability of trying to screen off tumors from the surrounding tissues. Surface irradiations contrasted with radium "puncture." Some of the reasons for the use of surface irradiations in preference to radium "puncture." The use of radium in some common diseases, such as carcinoma affecting the skin, mouth, cervix uteri, etc. Other uses of radium.

Discussion opened by Roswell T. Pettit, Ottawa and E. G. C. Williams, Danville.

3:00—"Radiation Therapy and Uterine Cancer."—Louis C. Kress, New York State Institute for Malignant Disease, Buffalo, New York.

Uterine Malignancy has been treated by all forms of radium and x-ray therapy—interstitial, intracautery, and external with radon seeds, radium tubes, packs and high voltage x-ray. Advantages of 4½ gram radium pack will be discussed. Advantages of high voltage x-ray will be presented. Slides showing effects of radiation upon cancer will be shown. End results and complications will be presented.

Discussion opened by Robert A. Arens and Herbert Schmitz, Chicago.

4:00—"Repercussion Therapy."—E. G. C. Williams, Danville.

A report of the study and research into the use of repercussion or secondary radiation increased by injections of solutions and colloidal suspensions into tumor masses during x-radiation describing materials and methods used.

Discussion opened by Prof. Geo. L. Clark, Urbana and Roy Keggereis. Chicago.

4:30—"Use of Radium in Post-Operative Parotitis."—Fred Decker, Peoria.

X-ray and radium therapy have been used in treatment of inflammatory conditions for many years. The use of radium in the treatment of post-operative parotitis is not so commonly known. A brief rèsumé of the literature and case reports will be given.

Discussion opened by B. C. Cushway and Roe J. Maier, Chicago.

Thursday Morning, May 21, 1936

COLUMBUS HALL

Joint Session with Sections on Medicine, Surgery, Eye, Ear, Nose and Throat and Public Health and Hygiene. For Program see Section on Medicine.

RULES GOVERNING PRESENTATION OF PAPERS

"All papers read by members shall be limited to twenty minutes, and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject.

"All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section when read, and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and will not appear in medical print before it has been published in the ILLINOIS MEDICAL JOURNAL.

"A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of the regular session if time permits, or as an alternative at the end of the program.

"All subjects shall be confined strictly to the subject in hand.

"No paper shall appear in the printed transactions of the meeting unless read in full or in abstract."

(From the By-Laws of Illinois State Medical Society.)

TECHNICAL EXHIBITORS AT 1936 ANNUAL MEETING

A. S. Aloe Company, St. Louis, Missouri.

Bard-Parker Company, Inc., Danbury, Connecticut.

R. B. Davis Sales Company, Hoboken, New Jersey.

DePuy Manufacturing Company, Warsaw, Indiana.

C. B. Fleet Company, Lynchburg, Va.

Gerber Products Company, Fremont, Michigan.

Hamilton-Schmidt Surgical Co., St. Louis, Mo.

H. J. Heinz Company, Pittsburgh, Pennsylvania.

Horlick's Malted Milk Corporation, Racine, Wisconsin.

Kellogg Company, Battle Creek, Michigan.

J. B. Lippincott Company, Philadelphia, Pennsylvania.

Libby, McNeill & Libby, Chicago, Illinois.

Lea & Febiger, Philadelphia, Pennsylvania.

Lepel High Frequency Laboratories, New York, New York.

V. Mueller & Company, Chicago, Illinois.

The C. V. Mosby Company, St. Louis, Missouri.

Mellin's Food Company, Boston, Massachusetts.

McIntosh Electrical Corporation, Chicago, Illinois.

The Medical Protective Company, Wheaton, Illinois.

M. & R. Dietetic Laboratories, Inc., Columbus, Ohio.

Middlewest Instrument Company, Chicago, Illinois.

Mead Johnson & Company, Evansville, Indiana.

Philip Morris & Co., Ltd., Inc., New York, New York.

Standard X-Ray Company, Chicago, Illinois.

Sutliff & Case Co., Inc., Peoria, Illinois.

W. B. Saunders Company, Philadelphia, Pennsylvania.

Universal Products Corporation, Pottstown, Pennsylvania.

White-Haines Optical Company, Columbus, Ohio.

NOTES ON EXHIBITS

The Universal Products Corporation will be represented by an exhibit of Surgeons' X-L-Lyte, a compact and serviceable diagnostic set, and not expensive. The set contains: ear speculum, tonsil pillar retractor, tongue depressor, magnifying lens, and nasal speculum, with direct illumination for all. Nickel silver curette, probe, ear spoon and applicator are included in the set. The entire set is contained in a neat and serviceable leather case which is equipped with a hookless fastener.

The A. S. Aloe Company, in Booth No. 1, will show a complete general line of instruments and equipment, offering everything for the doctor and hospital. A line of rustless steel instruments will be offered at a special discount. In addition will be shown the new Aloe Short Wave Diatherm and the new style Elliott machine. The Aloe Company's Illinois representatives, Mr. Kruse and Mr. Drennan, will be in attendance to serve in any way possible.

Look up these unusual new books at the J. B. Lippincott's exhibit: Pfaundler and Schlossmann, "Diseases of Children"; Peham and Amreich, "Operative Gynecology"; Kirschner and Ravdin, "Operative Surgery"; McBride, "Disability Evaluation"; Herrmann, "Passive Vascular Exercises"; Barker, "Treatment of the Commoner Diseases"; Emerson, "The Nervous Patient"; Barborka, "Treatment by Diet"; Goldthwait, "Body Mechanics"; Sr. Gabriel's "Through the Patient's Eyes"; Moore, "Principles of Ethics."

And the new editions just issued of these well-known texts and reference books: Eisendrath and Rolnick, "Urology"; Anspach, "Gynecology"; Davis and Muller, "Applied Anatomy"; Thorek, "Surgical Errors and Safeguards"; Rehberger, "Quick Reference Book of Medicine and Surgery"; "International Clinics," and "Annals of Surgery."

All these books are unusually and beautifully illustrated, with the exception of Barker, and must be seen to be appreciated. You will be welcome at Booth No. 2 and will not be importuned to buy.

The most exacting requirements of adequate liability protection are those of the professional liability field. Representatives thoroughly trained in professional liability underwriting invite you to confer with them at Booth No. 4. These are the representatives of The Medical Protective Company, specialists in providing protection for professional men.

When you are visiting the commercial exhibits, spend some of your time at Booth No. 5 to have demonstrated some of the outstanding features of the new "Jones Motor Basal" made by the Middlewest Instrument Company, Chicago, Illinois. You will be interested in the waterless, noiseless, no calculation of this lifetime-guaranteed instrument.

The DePuy Manufacturing Company will exhibit in Booth No. 8 at the Illinois State Medical Meeting in Springfield the DePuy Reducing Frame for double fractures of the lower leg, the adjustable Hyperextension Frame for applying plaster jackets, the double duty Bone Drill which will handle Kirschner Wire and Steinman Pins, various types of Kirschner Bows to meet the needs of the individual or industrial surgeon or the surgeon who does referred work, the Rocking Leg Splint for each bed pan service and treatment of fractures of the femur, gunshot wounds of the lower leg.

At Booth No. 9 Lea & Febiger exhibit, under the supervision of Mr. L. E. Drury, a number of important new works, as well as new editions of other standard medical books. Among the new works are: Hawes and Stone, "Pulmonary Tuberculosis"; DeRivas, "Parasitology and Tropical Medicine"; Berglund and Medes, "The Kidney"; Graham, Singer and Ballon, "Surgical Diseases of the Chest." New editions are also shown of Bridges' "Dietetics"; Kovac's "Electrotherapy and Light Therapy"; Jeliffe and White, "Diseases of the Nervous System"; Pemberton, "Arthritis"; Speed, "Fractures and Dislocations"; Boyd, "Pathology of Internal Diseases"; Knowles' "Dermatology"; Stimson, "The Common Contagious Diseases," and Haden's "Dental Infection and Systemic Disease."

The Philip Morris & Co., Ltd., Inc., in Booth No. 10 will demonstrate the method by which it was found that Philip Morris cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than ordinary cigarettes in which glycerine is employed.

Gerber's Strained Foods will be on display at Booth No. 11. There are illustrations and charts descriptive of the new Shaker Cooker process and samples open for inspection.

Booklets and leaflets are available, also scientific reprints. Some of the booklets are suitable for distribution by physicians, and we welcome inspection before ordering supplies.

A feature of the Mead Johnson exhibit in Booth No. 12 will be a display of the Percomorph group of products; namely, Meads Oleum Percomorphum, 50%, in liquid and in capsule form, and Mead's Cod Liver Oil Fortified with Percomorph Liver Oil.

The selection of Mellin's Food as a milk modifier enables the physician to have at hand an effective means for making diet adjustment to meet the needs of the individual infant and without sacrificing nutritional requirements. You are urged to call at Booth No. 13 to discuss your feeding problems.

V. Mueller and Company will present an interesting exhibit of the latest surgical instruments and equipment for the Surgeon, Specialist, and General Practitioner at Booth No. 14, featuring:

New Sightscope for magnified vision, with illumination attachment.

The Elliott Treatment Regulator for applying heat therapy for acute or chronic inflammatory conditions in the female pelvis and the male pelvis.

Masson's Fascia Stripper.

Thomas Oxinjector—a new apparatus for the administration of oxygen or other gases by the injection method: subcutaneous, intravenous, intraperitoneal, or rectal.

New Model Focal-Lite—an all purpose headlight. Projects a clear beam of light for illuminating cavities.

Smith-Petersen-Johansson Flanged Nail, with an improved mallet, as used by Dr. M. S. Henderson of Rochester, Minnesota.

The most outstanding recent development in the science of infant feeding—Libby's Homogenized Foods. This new process mechanically ruptures the food cells of vegetables, fruits, and cereals, refines the cellulose tissue, releases the contained nutriment, and makes these foods more easy to digest and more completely assimilated. Photomicrographs of strained and homogenized foods graphically illustrate the advantages of the newer process. The Research Laboratories of Libby, McNeill & Libby invite you to inspect their display in Booth No. 15.

Quality physical therapy products of McIntosh Electrical Corporation, 223-233 North California Avenue, Chicago, will be on exhibit in Booth No. 16. The meeting will be in charge of the Sales Manager, Mr. R. Herbert Hogan. Mr. Hogan will be assisted by two Illinois state representatives, Mr. E. N. Swinford and Mr. J. W. Maselter. The Hogan Brevatherm Short-Wave Diathermy Unit will be featured. The Brevatherm has proven itself to be one of the outstanding short-wave units on the market, and acceptance by the Council on Physical Therapy of the A. M. A. gives assurance of its safety and operating efficiency in actual clinical work. Other McIntosh equipment on exhibition include the new No. 1510 Modernistic Sinustat, the No. 8624 Standard Diathermy, and one of the best dollar value units in infra-red therapy, the No. 3610 Biolite.

This publishing house of Philadelphia and London, W. B. Saunders Company, will exhibit a complete line

of all their titles in Booth No. 17. Among them will be many new books and editions, including Christopher's brand new Textbook of Surgery, the new Mayo Clinic Volume, Berens' work on the Eye and Its Diseases, Levine's Clinical Heart Diseases, Diseases of the Respiratory Tract (Fortnight Lectures of the New York Academy of Medicine), Wolf's Endocrinology in Practice, Rehfuss and Nelson's Medical Treatment of Gallbladder Disease, Eusterman and Balfour's Diseases of the Stomach and Duodenum, Hinman's Urology, The Improved Medical Clinics of North America and the Surgical Clinics of North America, and many others. In addition, of course, there will be such standard works as Curtis' Obstetrics and Gynecology, Bickham's Operative Surgery, Beckman's Treatment, Kitchens' Diagnosis, Todd and Sanford's Laboratory Diagnosis.

You are invited to visit Booth No. 18. Not only will you be cordially welcomed, but you will be served delicious Cocomalt—hot or cold—as you choose. Come early—come often.

Cocomalt has a rich content of Iron, Calcium, Phosphorus and Vitamin D. It is an outstanding high quality food product scientifically formulated.

In Booth No. 20, Sutliff & Case Company, Inc., will display only one item at the Illinois State Medical Meeting at Springfield. This item, of course, is A-Vitam-Ung.

The Horlick's Malted Milk Corporation in Booth No. 21 will exhibit Horlick's the Original Malted Milk, both in natural and in chocolate flavors, powder and tablet forms.

Among the special uses of Horlick's Malted Milk which will be featured are its advantages in the liquid diet, notably in cases of tuberculosis and other wasting diseases, during and after pneumonia, in gastric and duodenal ulcers and acidosis. Horlick's has also been proven by its results, for over fifty years, as a dependable food in infant feeding, even in difficult cases.

Among the Bard-Parker products to be exhibited at Booth No. 22 will be the new Rib-Back surgical blade, incorporating new standards of sharpness, rigidity and strength. Also will be shown a complete line of stainless steel scissors with renewable edges, which require no resharpening, and a very complete demonstration of Rustproof Sterilization for surgical instruments.

H. J. Heinz Company, Pittsburgh, Pennsylvania, invites you to visit their display in Booth No. 23 of Tomato Juice, Breakfast Cereals and Strained Foods, *especially prepared for infant and convalescent feeding.*

Register for the second edition of their Nutritional Charts. *This revised edition, published in December,* 1935, contains, along with the vitamin, mineral and food composition charts, new sections on daily requirements and food allergy.

The exhibit of The White-Haines Optical Company, distributors of Blue Ribbon Ophthalmic Supplies, with general offices located at Columbus, Ohio, will feature the latest developments of Optical Science. White-Haines have a Springfield office located at 524 East Capitol Avenue.

Included in the exhibit (Booth No. 24) will be a demonstration of Loxit, a screwless construction type of rimless glasses. Lenses to be featured are the Panoptik Bifocal (including the improved cataract lens) and the Orthogon Soft-Lite lens that provides glare protection with wide vision correction. A particularly interesting section of the exhibit will be the display of Bausch & Lomb instruments, including the Clason Visual Acuity Meter, the Binocular Ophthalmoscope, the Slit Lamp, also the instrument that aroused so much interest throughout the country—the Wottring Rotoscope that simplifies the whole procedure of Orthoptic Training. The Rotoscope, first shown at the Academy meeting last year in Cincinnati, is now being used all over the country by Ophthalmologists, hospitals and clinics.

The White-Haines exhibit will be in charge of E. F. Wildermuth, general sales manager from Columbus, Ohio. Joe Kihn, manager of White-Haines of Springfield, and Donald Hunter, salesman. Be sure to visit Booth No. 24 if you are doing eye work.

The C. V. Mosby Company will exhibit its complete line of medical publications. Among the newer items to be displayed for the first time will be the following:

Taussig, "Abortion—Spontaneous and Induced."
Bray, "Clinical Laboratory Methods."
Dodge, "Medical Mycology."
Shelling, "The Parathyroid in Health and Disease."
Sherwood, "Immunology."
Muray, "Examination of the Patient."
Hansel, "Allergy of the Nose and Paranasal Sinuses."

Many other new books and new editions will also be available for visitors attending the convention to examine them. A cordial invitation will be extended all guests at this meeting to visit the Mosby booth No. 28.

The Lepel High Frequency Laboratories, Inc., New York City, will display their mobile and portable short and ultra-short wave machines, and also the Lepel quartz-mercury Ultra-violet Lamp.

These products have been accepted by the A. M. A. and have received the endorsement of leading physicians everywhere. Don't fail to see the Lepel exhibit at Booth No. 30.

Doctors are invited to visit the Kellogg Booth No. 53 for a cup of refreshing Kaffee Hag Coffee. Bottle exhibits showing the stages in decaffeinizing coffee are displayed and complete explanation of process is given. Reprints of articles in the *Journal of Pharmacology and Experimental Therapeutics* on the Effects of Caffeine, based on reports of research at the University of Michigan, are available.

Kellogg's All-Bran carries the Seal of Approval of the American Medical Association. Reprints of reports covering research on bran at Columbia University will

be distributed at the booth. The exhibit is in charge of Mrs. Winifred B. Loggans from the Home Economics Department.

The Hamilton-Schmidt Surgical Company of St. Louis will occupy exhibit Booth No. 25. They will show an interesting variety of new surgical instruments, also some Physo-Therapy equipment. A new Short-Wave unit will be demonstrated. A visit to their exhibit is highly recommended.

The Standard X-Ray Company will exhibit in Booth No. 27 the new Standard Shockproof Vertical Fluoroscope with Ortho-Diagraphic attachment, and also the new Standard Model "DV" 100 MA Valve Rectified X-Ray Generator. These two items should be of interest to all Doctors now using, or planning on using x-ray equipment.

At Booth No. 26 will be Phospho-Soda (Fleet), by C. B. Fleet Company, Lynchburg, Va. Phospho-Soda (Fleet) is a highly improved solution of the sodium phosphates, being stable and proportionately buffered to maintain normal metabolism. In addition, it produces the other well known therapeutic actions of sodium phosphate; it is a quick and non-irritating laxative and is credited with promoting the discharge of bile from the gall-bladder and biliary ducts.

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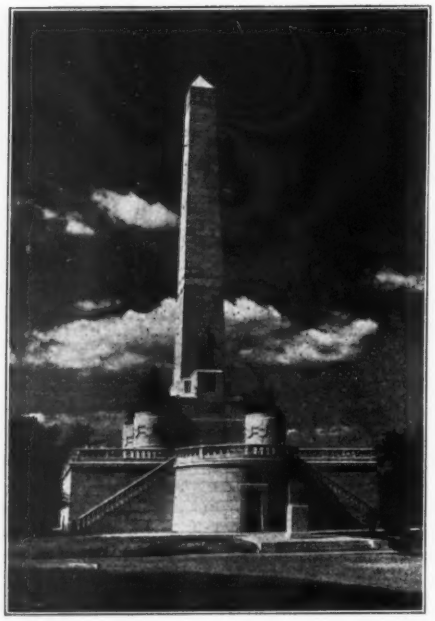
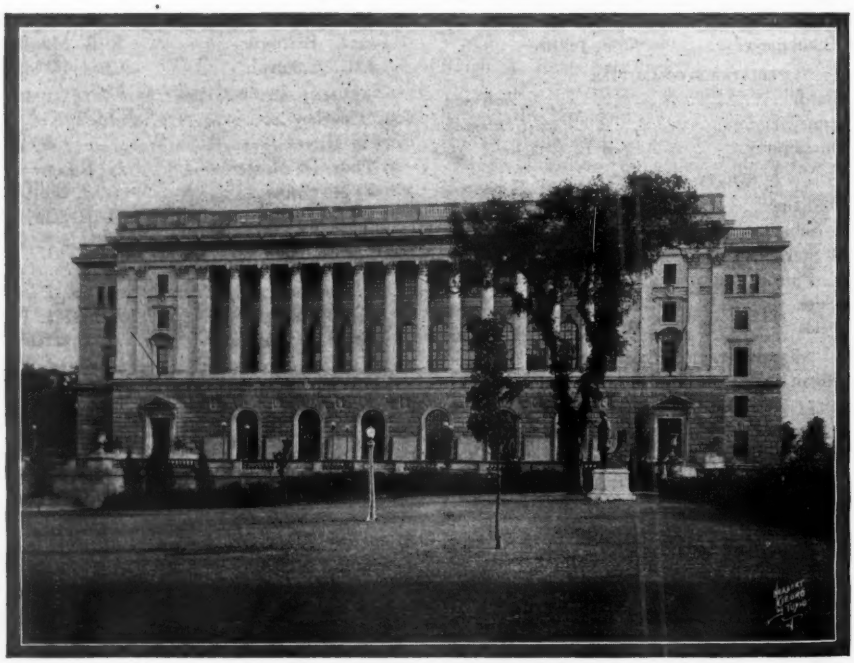
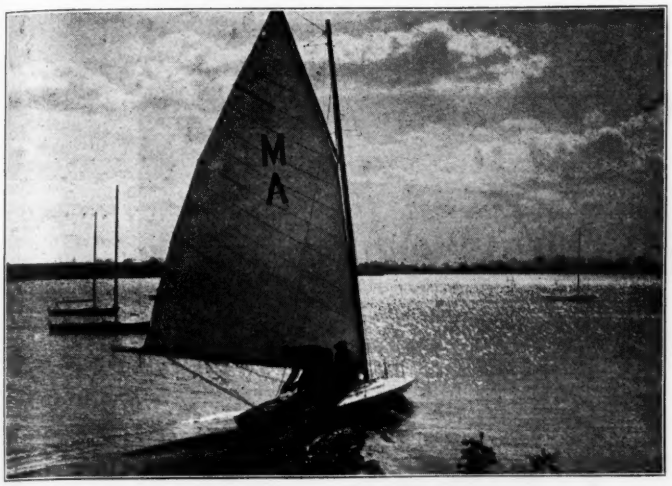


Left: Lincoln's tomb in Oak Ridge Cemetery.

Below: Main hall, State Museum, Illinois Centennial Building.

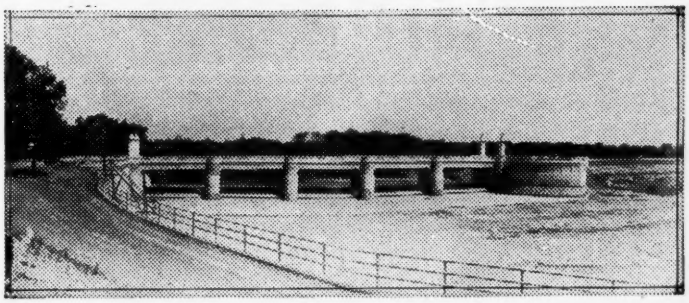


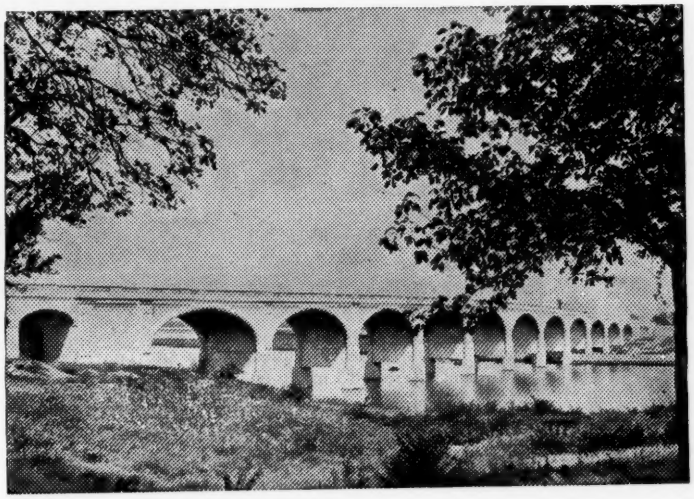
Illinois Centennial Building



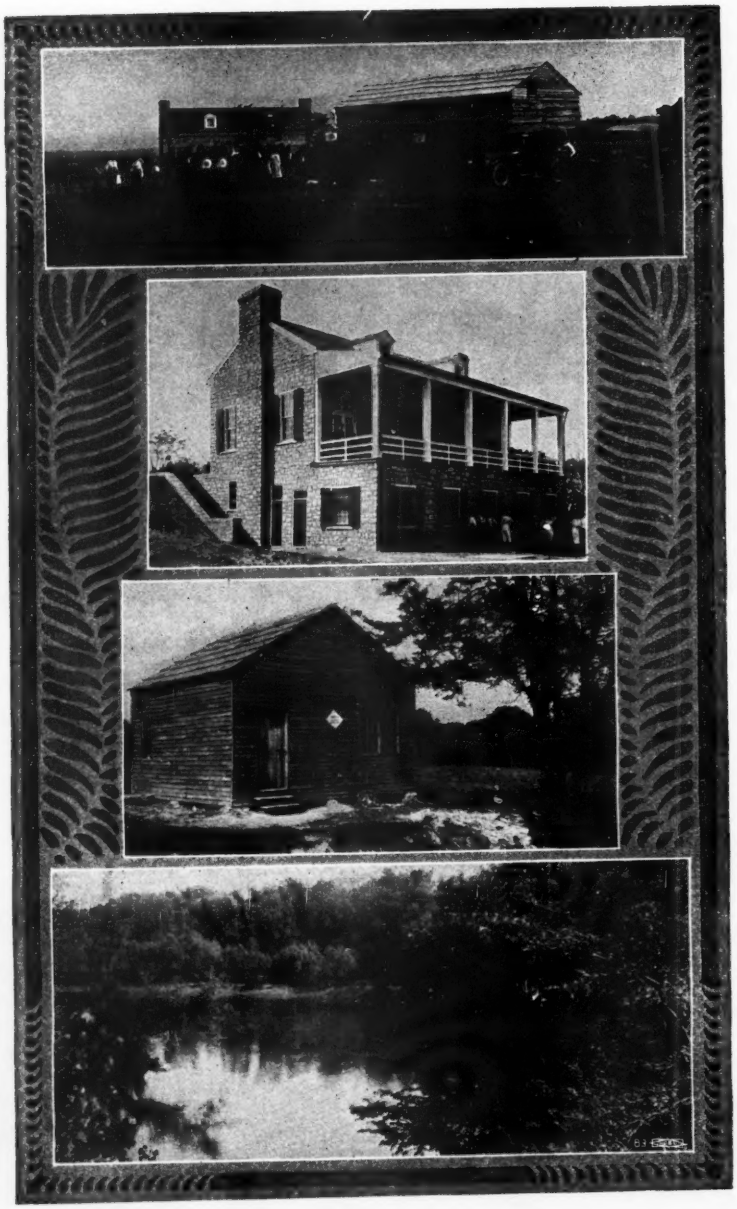
Left: Sail boat on Lake Springfield.

Below: Spillway Spaulding dam, Lake Springfield.





Right: Vachel Lindsay Memorial Bridge, Lake Springfield.



Views of Old Salem: Rutledge Inn at Top; Custodian's Residence and Museum; Restored Lincoln and Berry Store; View of Sangamon River from New Salem Hill.

Original Articles

WHAT CAN BE DONE FOR SINUS TROUBLE

GEORGE E. SHAMBAUGH, JR., M. D.
CHICAGO

What can be done for sinus trouble? The average person would be apt to answer this question in two sentences: Sinus trouble cannot be cured and sinus operations, once started, are often a vicious circle, one operation leading to another, finally leaving the patient worse off than ever. Nor are these ideas entirely confined to the layman. A good many physicians are skeptical of the results of the treatment of chronic sinusitis and are wary of operations on the nose and sinuses. The reasons for this distrust of sinus treatments and sinus surgery are not far to seek, as we shall see.

The successful treatment of sinus infections is based on certain fundamental, physiological, anatomical and pathological considerations which we must first understand. Knowing these fundamental facts the treatment of sinus infection is not very complicated and the results are not so bad if the proper treatment is persisted in.

The nose has two physiological functions, olfaction and respiration. In the bloodhound the nose is constructed mainly for olfaction but in man the sense of smell is rudimentary and the respiratory function is much more important. The chief function of our noses is to moisten, warm and clean the air that we breathe so that the pharynx, trachea and bronchi will not become dried out, crusted and clogged with dust. The nose is our *air conditioner*. Its function is particularly important in the cold, dusty air of our northern cities and any disturbance of function is, therefore, much more evident in this climate than in the balmy, humid atmosphere of Florida.

The inspired air first passes through the coarse, stiff hairs of the anterior nares which sift out insects and the larger particles of dust. The nasal cavity, instead of being just a hole for the air to pass through which would not make a very efficient air conditioner, is an irregular narrow chink due to fleshy structures called turbinates which hang down from the sides of the nose and nearly fill the nasal cavity. There are three turbinates on each side of the nose and since the nasal cavity is roughly triangular, divided by the septum in the midline, the superior turbinate is very small, the middle turbinate is medium in size, and the inferior turbinate is the largest. Except for a small area at the very top of the nose devoted to olfaction, the nasal cavity is lined throughout by a special kind of epithelium called the respiratory epithelium. This respiratory epithelium consists of a single layer of ciliated, columnar cells with here and there a bulging goblet cell which is discharging mucus onto the surface. The cilia are in constant motion throughout life and even for several hours after death. A fragment of mucosa removed from the nose and examined in a drop of normal saline solution under the microscope shows the cilia to be waving steadily and producing a strong current on the surface, red blood cells and any other particles being rapidly swept along. Beneath the ciliated epithelium is a rich vascular network and numerous mucous glands, particularly over the anterior tips of the turbinates where the drying, cooling effect of the inspired air is greatest. The mucous glands and the goblet cells keep the nasal mucosa bathed at all times in a thin film of clear mucus. The cilia keep this film moving in a constant stream to the nasopharynx whence it flows down the throat and into the stomach. In the normal nose there is nowhere an air space wider than 1 or 2 mm., the turbinates adjusting themselves very accurately to any moderate irregularities in the nasal septum. There is thus provided a large, moist, warm surface exposed to the inspired air so that by the time this air reaches the throat it is warmed, thoroughly humidified and most of its dust has adhered to the constantly renewed film of clear mucus. Nature has given us a very efficient air conditioner and any surgical measure which impairs this function will inevitably lead to trouble whereas surgery which is designed to restore the normal anatomy and physiology of the nose will be successful. It has been the lack of appreciation of this important air conditioning function of the nose which has resulted in so much misdirected nasal surgery with poor results.

In the climate of our northern cities this delicately adjusted air conditioner often gets out of

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order. First, our noses must endeavor to moisten the dry, hot air of overheated houses and a moment later they must try to thoroughly warm and clean the icy, sooty air of outdoors. In addition, we often catch cold partly as a result of our perpetually overheated houses and every head cold is an added burden to an already overworked nasal mucosa. As a result, we see many noses in this climate which fail to function perfectly, this failure taking one of three forms. The most common nasal ailment is failure to moisten the inspired air completely due to an underactive nasal mucosa. The air spaces are too wide and the mucous glands are not sufficiently active. This is atrophic rhinitis, a very common condition in its mild form and the most frequent cause for nasal symptoms that we see. The insufficiently moistened air causes the mucus in the back of the nose and roof of the nasopharynx to become partially inspissated and thickened. This thick mucus collects at the top of the posterior wall of the pharynx where the cilia leave off and the stratified squamous epithelium of the mouth and pharynx begins. Being too thick to flow by gravity as it should, it must, perforce, be snuffed and hawked out at intervals. In the extreme form of atrophic rhinitis the whole inside of the nose may become dry and covered with crusts.

The treatment for atrophic rhinitis is as simple as it is effective and consists of washing out the nose with normal saline once or twice a day. This cleans away any accumulation of thick mucus or crusts and stimulates the mucosa so that after a few months the nasal cavity may return entirely to normal and the treatment may be discontinued.

A less common nasal disturbance is the exact reverse of atrophic rhinitis, and is due to overactivity of the nasal mucosa. This condition is accurately termed hyperesthetic rhinitis. The normal nose responds to the stimulus of pepper or of very cold air by an increased flow of mucus and perhaps some sneezing. In hyperesthetic rhinitis the slightest stimulus such as an almost imperceptible draft, a little dust or some substance in the environment or in the diet to which the individual is sensitized results in attacks of sneezing, watery discharge and nasal obstruction.

The treatment of this condition is more difficult. If a specific allergen can be discovered and eliminated the symptoms clear up. Often the individual is sensitive to many things including cold air and then we try to desensitize the mucosa directly by the judicious application of cautery or chemicals which cause a superficial desquamation of the epithelium, the regenerated epithelium being less sensitive. This type of chronic rhinitis leads to a special type of polypoid sinusities which cannot be cured until the hyperesthetic rhinitis is cured. A considerable proportion of unsuccessful nasal and sinus operations are on this type of case.

The third type of chronic rhinitis, very prevalent in this climate, is the result of a head cold that has not cleared up. The infection in the nose lingers for weeks or months after the cold should have run its course, the mucous glands continuing to secrete excessive amounts of mucus mixed with more or less pus while the mucosa remains congested and swollen interfering with adequate drainage and respiration. This type of chronic rhinitis, chronic infectious rhinitis, is kept going by the irritating effect of the cold, smoky air of our cities and usually clears up promptly on the coming of summer or on going South if the patient can afford this. Most patients cannot afford this, but local treatments are usually quite effective in clearing up the infection and restoring the normal function of the nose.

I have mentioned these three forms of chronic rhinitis, atrophic, hyperesthetic and infectious, because most of these patients believe that they have sinus trouble and too many of them have had treatments or even operations for sinus trouble that is not present. They are not improved and, of course, tell their friends that sinus operations do more harm than good. The bad reputation that sinus treatment enjoys is due in good part to patients who never had sinus trouble. As long as physicians undertake to diagnose and treat nasal and sinus conditions without an understanding of the function of the nose and without ability to accurately diagnose nasal and sinus conditions, sinuses will continue to be treated or operated on when the nose is at fault, and the nose will be treated in vain when the trouble is confined to the sinuses. The most important cause for failure in the treatment of sinusitis is failure to make the correct diagnosis.

The nasal accessory sinuses develop as diverti-

cula from the nasal cavity. At birth the maxillary sinus is already present as a small, wide-mouthed pouch growing into the maxilla from beneath the middle turbinate. The mucous membrane in the sinuses is the same as in the nose but is thinner, less vascular and with fewer mucous glands since there is no circulation of air requiring warming and moistening. The ciliary current in the sinuses is directed out the ostium into the nose. The ethmoid cells are also present at birth as small pockets growing up into the ethmoid bone from beneath the middle and superior turbinates. The sphenoid sinus, at birth, is only a shallow dimple in the front wall of the sphenoid bone at the back of the nose, while the frontal sinus does not develop until mid-childhood when an ethmoid cell begins to grow up into the frontal bone.

Since the antra and ethmoids are the only sinuses present in infancy and since they are but shallow, wide-mouthed pockets extending out from the nasal cavity, sinus infection at this age is always a part of nasal infections. Every attack of acute rhinitis is accompanied by an increased secretion of mucus and pus from the sinuses as well as the nose but since the sinuses drain freely they clear up as quickly as the nose. No special treatment is needed for this rhinosinusitis of infancy except to keep the nose clean and open in the more severe cases by ephedrine drops and suction. The one common complication of this acute sinusitis of infancy that accompanies every head cold is orbital cellulitis, the result of infection from the ethmoid penetrating the very thin lamina papyracea into the orbit. The symptoms are redness and swelling of the eyelids with proptosis of the eyeball. The treatment is conservative, shrinking nasal drops being used to keep the nasal passages open. Occasionally the orbital cellulitis does not clear up and an abscess forms between the periosteum and the lamina papyracea. This abscess must be drained by an external incision.

As the child becomes older and the sinuses become larger with relatively smaller ostia, sinus infections begin to run a course more independent of the nose and require special treatment. In the adult as in the child, the sinus mucosa is probably infected to some degree with every severe head cold, but the normal ciliary activity keeps the cavity swept clean of any increased mucus and pus secretion. This is not ordinarily called an acute sinusitis since it causes no special symptoms and clears up as the rhinitis subsides. It is only when the inflammatory thickening of the sinus mucosa blocks up the ostium so that the sinus fills with mucus and pus and special symptoms arise that we say the patient has an acute sinusitis.

Acute sinusitis is a self-limited disease which runs a definite and characteristic course and usually clears up if left alone. It begins following a head cold or other upper respiratory infection with pain and tenderness due to the pressure of the accumulated secretion on the inflamed mucosa. Unless the obstruction is complete, nasal and post-nasal mucopurulent discharge from that side of the nose are present as the excess secretion is forced out of the swollen ostium. The pain and headache subside as the ostium opens and the pressure diminishes, and in another week or two the discharge clears up. The diagnosis of acute sinusitis is not difficult since it practically always follows an acute upper respiratory infection. Exceptions are sinus infections from swimming and infection of the maxillary sinus from an abscessed molar or pre-molar tooth which has ruptured through the floor of the antrum.

The treatment of acute sinusitis consists of improving drainage by shrinking the mucosa around the ostium. We use 10% neosilvol in 1% ephedrine aqueous solution, two drops with a medicine dropper into each nostril with the patient lying on his back with the head thrown back so that the solution will run into the upper half of the nasal cavity under the middle and superior turbinate where the sinus ostia are located. This is repeated two or three times daily or oftener in severe infections. Neosilvol and argyrol should be prescribed only in small amounts and the prescription should be labelled "not to be refilled" because of the danger of argyrosis, the deposit of metallic silver in the tissues which may result in a stubborn atrophic rhinitis or in a permanent, gray color to the skin of the face. We are seeing increasing numbers of cases of argyosis, usually the result of prolonged self-medication. Adrenalin should be avoided because of the irritation and reaction it often causes with increased inflammatory swelling of the nasal mucosa. If the pain of acute sinusitis is severe, rest in bed and heat or ice locally, whichever is more comforting, is indicated. The

patient's room should be kept warm day and night and the air humidified by keeping a steam kettle going supplemented by steam inhalations. By assisting the nose in this way in its task of air conditioning, the infection subsides more quickly and the nasal irritation and congestion are relieved.

After the first week or two of an acute maxillary sinus infection, drainage may be facilitated and recovery hastened by irrigation. This is best carried out through the natural ostium using a special curved cannula which can be easily and comparatively painlessly inserted in most cases. Occasionally it is necessary to puncture through the bony wall with a straight needle. Drainage from the ethmoid and sphenoid sinus can be facilitated after the first week or two by a special technic developed recently by Proetz of St. Louis. The patient lies on his back with the head hanging over the end of the table, resting on a stool, so that the chin and external auditory canal form a vertical line. A solution of normal saline containing ¼% to ½% of ephedrine is now introduced into the nose, filling the upper half. Suction is applied to the anterior nares while the patient says "K" to close the palate. This sucks a small amount of secretion from the sinuses. When the suction is released, ephedrine solution enters the sinus replacing the pus. This is repeated 20 to 30 times by which time a large amount of mucopus will have been evacuated with considerable subjective relief and apparent shortening of the duration of the infection. This method of draining the ethmoid is called, by Proetz, the displacement technic.

The prognosis of acute sinusitis is usually good. A rare case of frontal sinus infection where severe pain persists for more than two weeks and where shrinking solutions do not effect drainage, may require a simple intranasal operation to open the nasofrontal duct. Surgery is otherwise not indicated in acute sinusitis unless a perforation into the orbit or intracranially has occurred, and these complications are rare.

A small number of cases of acute sinusitis, however, fail to clear up spontaneously and become chronic if untreated. We come now to a consideration of chronic sinusitis.

Acute sinusitis may be defined as an acute, self-limited disease which tends to clear up in a matter of days or a few weeks if left alone. Chronic sinusitis similarly may be defined as a chronic infection which does not clear up spontaneously but which tends to continue indefinitely. Except for an abscessed tooth which may be the cause of chronic maxillary sinusitis, chronic sinus infection is usually the result of an acute sinusitis that did not clear up and was neglected. Chronic sinusitis is largely preventable by proper attention to all cases of acute sinus infection.

What is there about chronic sinusitis that prevents spontaneous recovery? To what is the chronicity due? Let us see what pathology is found in chronic sinusitis. In acute sinusitis the subepithelial connective tissue is hyperemic, edematous and infiltrated with large numbers of lymphocytes and moderate numbers of polymorphonuclear leucocytes. In a fresh bit of tissue under the microscope these polymorphs may be seen migrating toward the surface by pseudopod formation, finally escaping through tiny canaliculi through the basement membrane to emerge on the surface and add to the pus in the sinus. The epithelium usually remains intact except in very severe infections when areas of necrosis occasionally occur. In chronic sinusitis there is also increased vascularity and edema of the subepithelial connective tissue but, in addition, there is an actual increase in the thickness of this connective tissue the increase being somewhat irregular so that the mucous membrane is nodular or even polypoid. The cellular infiltration consists chiefly of lymphocytes and plasma cells with a few polymorphonuclear leucocytes on their way to the surface. The ciliated epithelium in several hundred cases of chronic purulent sinusitis was always intact and in 20 consecutive cases of long standing purulent maxillary sinusitis where a bit of fresh mucosa was examined in a drop of normal saline under the microscope, the cilia were normally active in every instance. Necrosis of the mucous membrane or destruction of the ciliated epithelium is practically not seen in chronic sinusitis. Then why are these cilia not able to sweep the sinus free of pus and allow the mucous membrane to recover from the infection? First, the accumulated secretions may be so thick and gelatinous that the sinus is mechanically unable to empty itself. Similarly, a badly deflected septum sometimes blocks a sinus ostium sufficiently to prevent satisfactory drainage. Second, the infection in many cases of chronic sinusitis

appears to be anaerobic, the pus is thin and flows out into the nose without difficulty but until free ventilation is established pus will continue to be formed in the sinus. Third, the mucous membrane lining the sinus may become so thickened and infected that it will continue to secrete mucopus for a long time, even after free drainage and free ventilation have been established. When we come to treatment we shall see that it must be adapted according to which factors are at work preventing recovery.

The most difficult problem in chronic sinusitis is diagnosis and this is the stumbling block responsible for most of the failures. The symptoms are not of great assistance except to suggest the possibility of chronic sinus infection and there may be no symptoms at all, the antrum, for example, remaining filled with pus for years, any occasional drainage into the nose being carried down the throat without the patient's being aware of anything unusual. Again, systemic symptoms such as arthritis, neuritis or chronic fatigue are sometimes the only symptoms produced by a chronic purulent sinusitis, the infection being detected only by routine examination of the sinuses. These silent sinuses are more frequent than most people realize.

The most common symptom of chronic sinusitis is postnasal discharge which is usually mucopurulent. This, however, is equally, in fact more often, a symptom of some form of chronic rhinitis. Sometimes the thickened mucosa herniates through the ostium of the sinus and protrudes into the nose as polyps in which case nasal obstruction will be a symptom. Headache and pain are not very common symptoms of chronic sinus disease, contrary to popular belief. Most chronic sinuses don't cause headache and most headaches are not caused by sinus disease. When headache and pain occur in chronic sinusitis it is usually during acute exacerbations induced by an acute head cold. Headache from maxillary sinus infection is often felt above the eye but may be felt in the cheek or referred to the ear. Frontal sinus pain is always felt in the frontal region. Ethmoid sinusitis causes aching pain in the region of the ethmoids between the eyes or in the frontal region. Sphenoid sinus pain may be felt in the occiput, in the top of the head, around the ear or in the frontal region. Loss of the sense of smell is an occasional symptom from chronic sinusitis when the olfactory portion of the nose is blocked by polypoid mucosa protruding into this part of the nose. An important symptom of chronic sinus infection is susceptibility to head colds and another very important symptom is a chronic bronchitis or a bronchiectasis. It has been shown that if iodized oil is injected into the antrum today some of it will be in the bronchi tomorrow. During sleep when the swallowing reflex is quiescent some of the postnasal discharge flows into the lower air passages setting up and maintaining a chronic bronchial infection. Every patient with bronchitis or bronchiectasis should have the sinuses examined.

The diagnosis of chronic purulent sinusitis depends upon demonstrating that a sinus is filled with pus. First in importance is actually seeing pus coming from the sinus ostium. If we see this and the patient has not had a recent acute cold, our diagnosis of chronic sinusitis is made. However, the antrum, anterior ethmoids and frontal sinus all empty into the nose close together under the middle turbinate while pus from the sphenoid and posterior ethmoids is seen at the same point in the nose so that we cannot yet be certain which sinuses are involved. Moreover, in many cases of chronic purulent sinusitis repeated examinations of the nose will be negative and we must rely upon other methods of diagnosis.

The x-ray is second in importance in diagnosing chronic sinusitis but the x-ray is not infallible even when well taken since an old infection which has cleared up may continue to show an x-ray shadow due to increased bone density though the sinus be now healthy and clean. The x-ray is particularly unreliable in the case of the ethmoid where a negative x-ray plate may be obtained in an undoubted chronic purulent ethmoiditis.

Third in importance in diagnosing chronic sinusitis is the finding of hypertrophied mucosa in the nose at the sinus ostium. Fourth is transillumination, which is similar to the x-ray but less expensive, much less dependable and practically of value only in the case of the maxillary sinus. In the case of the ethmoid sinus the use of the displacement technic of Proetz is of considerable value in diagnosis. In the case of the antrum, exploratory irrigation is indispensable in confirming or ruling out a purulent maxillary sinusitis. Finally, in rare doubtful cases we may

be unable to make a positive diagnosis without opening the sinus operatively. This is especially true with regard to the frontal, ethmoid and sphenoid sinuses.

We come now to treatment. The treatment of chronic purulent sinusitis consists essentially of drainage and ventilation. Let us consider the sinuses one at a time.

A fair proportion of chronic maxillary sinusitis is the result of the mechanical inability of the sinus to extrude a thick, gelatinous accumulation of mucopus. A single irrigation has cured a sinus infection of years' duration. Usually a series of a dozen or more irrigations are necessary before the washing is negative and the symptoms disappear. Even where the initial irrigation produces liquid pus with a foul odor, the chronic infection may clear up with irrigations alone so that in every case of chronic purulent maxillary sinusitis simple irrigations should be given a trial.

If a series of irrigations has not cleared up a chronic maxillary sinusitis and pus continues to collect in the sinus, then an operation is indicated to provide constant drainage and free ventilation. This operation consists of making a large window opening under the inferior turbinate. The anaerobic infection quickly subsides now that there is free ventilation, the production of pus steadily diminishes and in a few weeks the great majority of cases of chronic purulent maxillary sinusitis will have completely cleared up. The thickened mucosa shrinks and returns to a semblance of its former state. In the occasional case of chronic maxillary sinusitis the mucosa is so thickened and infected that even with adequate drainage and ventilation the production of mucopus may continue indefinitely. Or sometimes the window opening may close before the infection has subsided. Removal of the thickened mucosa is now indicated and this is accomplished through an opening through the front wall of the antrum under the upper lip, the Caldwell-Luc radical antrum operation. In our experience this operation is not often necessary.

Chronic frontal sinusitis usually requires an intranasal operation to enlarge the nasofrontal duct followed by a series of irrigations. The external frontal sinus operation is rarely necessary and is one of those operations which have led to the bad reputation of sinus surgery since the end-results may be worse than the condition for which the operation was done. We avoid the external frontal sinus operation wherever possible.

Chronic ethmoiditis sometimes responds to repeated evacuation by the Proetz displacement technic while improving the drainage from the upper part of the nasal cavity by correcting a deflected septum or by the use of neosilvol nasal packs to reduce the congestion of the mucosa may suffice to allow recovery. Other cases of purulent ethmoiditis, however, require surgical opening of the cells, satisfactorily carried out intranasally, as a rule. Chronic suppurative sphenoiditis usually requires enlarging of the ostium by an intranasal operation.

What is the effect of these operations on the function of the nose? The window operation on the antrum does not disturb in any way the air conditioning activity of the nose. The intranasal frontal and ethmoid sinus operations can usually be done without disturbing the turbinates and, here again, the result is an anatomically and physiologically normal nasal cavity. The sphenoid sinus operation usually requires removal of most of one middle turbinate and a mild atrophic rhinitis often ensues requiring saline nasal wash from time to time.

What are the end-results as far as cure is concerned? First, we must emphasize that a person who has recovered from a chronic sinusitis remains susceptible to recurrences for some time, but if these recurrences are promptly treated they can be quickly relieved and gradually the resistance of the sinus increases until there is no further trouble. We may compare a sinus infection to a corn of the toe. The corn can be gotten rid of by changing shoes or going barefoot but once there has been a corn on a toe, this toe remains susceptible to a recurrence for some time.

Poor results from the treatment of sinus disease can be attributed first, to wrong diagnosis; either there is no sinus disease or only one is being treated when several are involved; second, to wrong treatment such as nasal sprays for a maxillary sinusitis when irrigations are necessary; third, to over-radical operations with removal of functioning nasal tissue resulting in atrophic rhinitis; and fourth, to poor technic in carrying out nasal operations such as an operation to correct a deflected septum being incom-

plete and leaving the septum almost as deflected as before.

If the correct diagnosis is made and if the most conservative measures that will lead to a cure are employed and, finally and most important of all, if the patient is faithful and continues under observation until the condition has completely cleared up and any recurrences are cleared up, chronic purulent sinusitis can be cured in all but a very small proportion of cases by irrigation or by simple intranasal operations which are not disfiguring, which do not impair the function of the nose and will not leave the nose and sinuses worse than before, even should the sinusitis persist or recur.

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RHINOPLASTY. SOME PRACTICAL CONSIDERATIONS

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Since the world war, plastic surgery in general and rhinoplasty in particular have sprung into prominence and at the present time are gaining more widespread interest than at any time in the past. Many factors have contributed to this phenomenon: among the most significant being the publicity emanating from Movieland and other centers of theatrical production and the instinctive desire for beauty which the motion picture has aroused. The continuous and frequent allusions to this subject in connection with prominent performers and numerous articles in the lay press have done much to raise the proposition out of the dusky limbo of mystery and superstition into the spotlight of inquiry and lively interest. There has been a tendency to dispel the notion that changing the shape of the nose is an admission of an inferiority complex and the public at large have become more tolerant and less critical of those who seek this type of work. Yet, despite the progress that has been made along these lines, there is still much to be accomplished before corrective rhinoplasty can be accepted without bias, properly evaluated and stripped of the chicanery, mysticism and skullduggery with which in many quarters it is still surrounded. To the vast majority of the public, the belief is still prevalent that plastic surgery is an extremely difficult act and that skill in its practice is the particular God-given privilege of but a few chosen favorites. Also the idea that such operations are very expensive and beyond the reach of the average wage earner is erroneous and should be dispelled. The honest legitimate surgeon sets his fee within the patient's ability to pay regardless of the type of surgery that may be required. Much of the misconception and exaggeration connected with plastic surgery can be laid at the door of ethical practitioners who

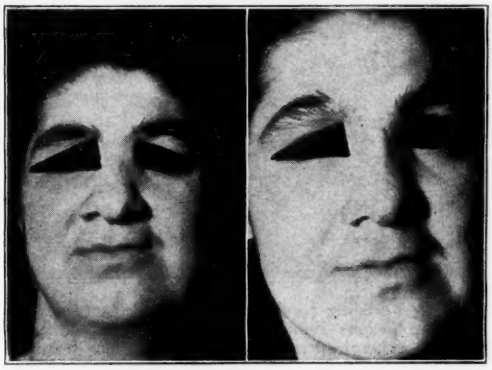

Fig. 1. Broad twisted bridge; slight saddle; wide tip; flaring nostrils. Nasal bones infracted, ivory piece inserted to fill the depression, tip narrowed and flaring alae shortened. Type of case in which little improvement achieved because of general ensemble.

for years shunned this type of work, leaving it almost entirely in the hands of quacks and charlatans whose lack of skill was more than compensated by their marvellous salesmanship. But times have changed. In this seething restless world of today men and women will not be deterred by high minded professional scruples and will stop at nothing that will in their own opinion enhance their opportunities for gaining fame, fortune, adulation or whatever else may be their objective. As great a man as Gillies[1] only recently recognized the legitimacy of such aspirations and publicly stated that it was not only the prerogative but the duty of surgeons at large to qualify themselves in this field in order to better serve the public.

Much of the timidity of rhinologists in facing this subject has been due, first, to the lack of knowledge and training and second, to an

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1. Gillies H.: The Development and Scope of Plastic Surgery. Northwestern University Bulletin. The Medical School, 35: 20, Jan. 28, 1935.

exaggerated idea of the difficulties and dangers inherent in the practice of plastic surgery. It is not our intention to minimize these factors but rather to point out that the correction of nasal deformities is no more difficult than any other nasal surgery provided one has the patience to learn some elementary principles and acquire a knowledge of technical details. Books on the subject are available, many of them replete with adequate illustrations and a visit to any of the

Fig. 2. Receding forehead and chin detract from appearance despite removal of hump. Type of case in which general ensemble outweighs any one feature.

larger centers will afford the student sufficient practical information to get him started. If he will then begin with the more simple procedures and gradually work up to the more complicated ones, provided he possesses average technical ability, proficiency will follow in the course of time. There is much, however, that can be said on the subject which is not to be found in text-books but which is nevertheless of paramount importance and it is the purpose of this paper to point out some practical observations which may prove of assistance to those who contemplate taking up this work.

In the first place it is important to differentiate the real from the imaginary deformity, ever bearing in mind that a patient who is not satisfied is likely to prove an incubus from which there is no escape. A safe rule to be observed is that the more minor the deformity, the less is the probability of success. A pronounced deformity properly corrected will be followed by sufficient change in the patient's appearance to evoke comment and unless the patient's friends notice the change, one's efforts may be in vain regardless of the fact that the operation was satisfactory to the surgeon. Operating to gratify a patient's whim where the deformity is only in the patient's mind must be avoided and discouraged. To attempt to satisfy a patient whose mind is set on a change of features that is not indicated and may even be impossible of achievement is extreme folly and the sooner one learns to say "no" in these cases the better for both surgeon and patient. The motives which impel certain individuals to seek out a plastic surgeon are in many instances weird and bizarre and must be carefully considered before an operation is undertaken. For instance, take the case of a middle aged woman who broke down and confessed that she was seeking to improve her features in an effort to recapture the affections of an errant husband. The surgeon who attempts to satisfy the woman's ambition in such an instance lets himself in for a mess of trouble. No matter what he may accomplish surgically he is certain to fall short of attaining what his patient most desires and therefore his efforts will result in failure, recrimination and possibly a lawsuit at the hands of the disappointed spouse. On the other hand a young man or woman seeking advancement in a field of work where personal appearance is of importance but who is handicapped by an abnormal nose or ears is deserving of sympathy and should be helped. In this day

Fig. 3. Cartilaginous portion of nose twisted to left. Correction by submucous elevation of left side of septum to its summit below dorsal skin. Curve eliminated by hacking. Position maintained by wax plug within the nose.

and age great importance is attached to attractiveness among those who serve the public and where competition is so keen, the prize will often go to those most favored by Nature, frequently in preference to many who are more gifted in

talent but less prepossessing in appearance. The elimination of a homely feature not only becomes manifest in the patient's general features but also reflects itself in his bearing and disposition.

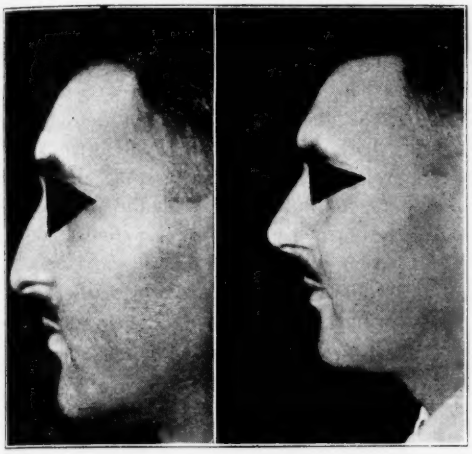

Fig. 4. Slight curved contour of bridge. Type of case where deformity is slight and correction difficult. Raising the tip slightly makes a marked difference.

We have seen many instances where a bashful, retiring, diffident and self-effacing individual became confident, aggressive and self-assurant and where his entire mien and behavior changed for the better. But as we said before it is extremely important to differentiate between the real and the imaginary deformity lest one be involved in a fruitless quest which can only lead to disappointment and even recrimination.

In the second place it is essential that the surgeon make an accurate appraisal not only of the deformity but of its relationship to the other features. One cannot make a silk purse out of a sow's ear, neither can one expect beauty of a countenance to follow remodeling of a nose when the other features are out of harmony. For instance, a receding forehead and chin cannot be minimized by chopping down the nose as I have had occasion to observe and it is necessary to impress this fact upon the patient so that he may not be misled. The patient must be made to understand that changing the shape of the nose will not alter the angle of the forehead nor change the slant of the eyes and any improvement in the ensemble that may follow is to be considered so much velvet. In other words one must not promise the impossible but must stick closely to the facts. By taking a plaster impression of the patient's face and running up a model one is in a position to demonstrate objectively just what can be done and what result may be expected. It is far better to understate the expected results than overstate them. Conservatism in the prognosis is the safest way to avoid disappointment. While this may not be consistent with good salesmanship and may often turn the patient away or affect the size of the fee collected, it is nevertheless the only honorable course to be followed.

In the third place the patient must be informed as to the possible complications that may ensue and thoroughly acquainted with the procedure in its essential details. It is the height of folly for the surgeon in his eagerness to "sell" the patient, to minimize the operation and gloss over the numerous discomforts and minor complications that usually follow these operations. The patient should know what the average period of disability will be; he should further be informed with regard to postoperative swelling, edema and discoloration of the lids, possible bleeding, nasal obstruction due to the use of packs, splints or whatever appliances may be indicated. If implants are used, organic, inorganic, autogenous or whatever the surgeon's choice may be, the patient must know that there is a certain percentage of failure, due either to intolerance of the tissues, infection or possible postoperative trauma. A patient in full possession of all of these facts and possibilities who consents to an operation is likely to be far more cooperative and appreciative than one who is blindly led into it by glib promises and exaggerated claims.

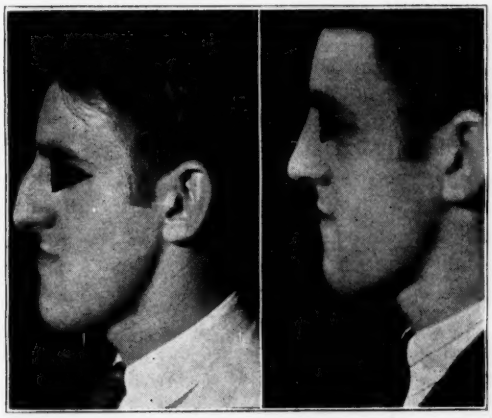

Fig. 5. Large bony hump in a patient with an old repaired hair lip. Removal by saw.

Coming down to the operation itself let us see what precautions are necessary, what type of case is favorable, what type is particularly difficult and what the pitfalls are to be avoided.

In the first place the operation should not be performed during a season when respiratory in-

Fig. 6. Hump and long nose. Former removed by saw. Latter corrected by usual triangular excision of lower end of septum and upper lateral cartilages. Procedure comparatively simple. Marked deformity and striking result. The type of case usually very satisfactory.

fections are most prevalent. One never knows what virulent organisms may be harbored in the tonsillar crypts or other lymphoid tissue of the prospective patient at such a time. Neither should the operation be done too recently following a cold or sore throat. At least two weeks should elapse following recovery from such an infection before nasal surgery is attempted. In the second place one should have a definite plan of procedure carefully worked out in advance. It is neither safe nor scientific to start the operation and develop the successive steps as one goes along because it is often impossible to retrace one's step. In the third place the patient should be properly prepared. Morphine and atropine or scopalomine administered an hour in advance does much to allay the nervous tension under which most patients labor. The face should be washed and wiped with alcohol. The vibrissae should be clipped and the vestibule and external nose touched with half or quarter strength tincture of iodine. The mucosa needs no cleansing agent because of its protective blanket of mucosa and inherent resistive powers. Prior to the injection of novocaine the anterior part of the septum should be anesthetised with pledgets of cotton with 10% cocaine. This makes the needle punctures less painful. The injection of novocaine 1% with adrenalin is performed through a 27 gauge needle first introduced at the mucocutaneous border and then carried backward over the septum. Again introduced at the mucocutaneous border the injection is carried along the length of the membranous septum thus infiltrating both sides at once. The injection is carried from the anterior nasal spine upward to the summit of the free border of the septum and from here in an outward direction along the projecting border of the upper lateral cartilage. A longer needle is now used to gain access to the nasal dorsum, the fluid being deposited in the loose subcutaneous tissues all the way up to the glabella. While the procedure is carried on the opposite side the tissues are gently massaged between the thumb and forefinger to distribute the fluid equally.

During the operation itself it is unwise for the surgeon to think out loud. Even though the patient may be partly asleep from the effects of the preoperative medication he is still sufficiently conscious to apprehend what is going on and will react unfavorably to remarks that the surgeon may utter for the benefit of his assistants or nurses, particularly when these comments pertain to the difficulty of the operation. The patient is likely to distort or exaggerate the surgeon's remarks and thereby increase his apprehension and fear as to the ultimate outcome. It is of the greatest importance that the patient maintain his confidence in the surgeon and retain that placidity of mind and spirit which is so essential to a satisfactory result. We must bear in mind that an individual undergoing a rhinoplastic procedure is usually a bit more self-conscious than under other conditions and is easily susceptible to suggestion. It is essential that his frame of mind be as happy as possible. There is no place for doubt once the procedure has been embarked upon.

Coming now to the operative procedures themselves, there is considerable variation in the difficulty and inherent dangers among them, of which it is well to speak more in detail. In other words, some operations are comparatively simple and free from danger while others require considerably greater skill and carry with them a certain element of risk. In general those pro-

cedures which are confined to the lower half or cartilaginous portion of the nose are easier to do and less likely to be followed by complications than those in the upper half or bony portion. Infections are far more frequent following removal of a hump or nasal refracture than such operations as raising the tip or shortening the nose. The reason for this lies in the fact that operations on the bony framework necessitate intra-nasal elevation of the periosteum which creates an artificial cavity into which infection may easily enter; this is particularly true if bony fragments or blood clots are left behind.

Among the operations most frequently performed on the cartilaginous part of the nose may be mentioned those which aim to shorten the nose or narrow the tip. The former is accomplished by excising a wedge, base upward from the lower free border of the septal cartilage including the mucosa on both sides and two smaller triangular wedges from the upper lateral cartilage. To do this properly it is necessary to have the incision through the membranous septum extend from the anterior nasal spine below up to the very summit of the quadrilateral cartilage. It is also important that the upper lateral cartilages be severed from their attachment to the septum so that the excision may be adequate and permit the overlying skin to slide upward without causing a thick buckling when the columella and tip are pushed upward. Silk sutures passed through the septum and the membranous septum behind the columella pull the latter upward and anchor it in its new position. The incisions in the lateral cartilage require no sutures but are held away from the septum by either a vaseline pack or a plug of dental wax. Adhesive strips holding the tip upward and temporarily exaggerating the correction are worn for at least 10 days to 2 weeks in order to take the tension off the sutures and prevent stretching and subsequent sinking of the tip.

Of the various methods of narrowing the nasal tip we believe that described by Safian[2] is the most practical as it offers easier access to the lower lateral cartilages whereby the excision may be more accurately performed. Here also sutures are dispensed with and the vestibule is merely packed for a day or two. The after care of these cases is extremely important inasmuch as frequently there is a tendency for sufficient scar tissue to develop in the spaces from which the cartilage was excised thus filling the tip and defeating the purpose of the operation. We have lately found it very useful to apply pressure over each side of the tip by means of small plates of copper, held in place by strips of adhesive. The effect of this procedure is to keep the external skin in close contact with the underlying severed cartilage until the latter is healed thus eliminating the space into which granulations might grow and develop into a thickening. The copper and adhesive strips are removed every 48 hours to permit cleansing of the nose. This method of treatment is carried on for about two weeks or until the wounds are completely healed.

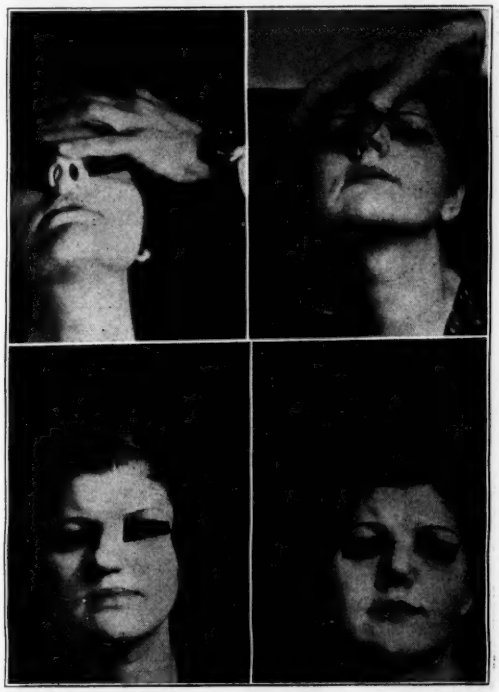

Fig. 7. Dislocation of lower end of septum; nose deviated to the right. Correction by nasal refracture and reposition of septal cartilage according to Metzenbaum.

A more difficult procedure is involved in correcting a deviated nasal tip. This condition may be part of a twisted nose due to an old fracture or it may be caused by a long septum which is bent in its lower portion thus pushing the lower end of the nose off to one side. In the former instance no amount of surgery on the cartilages will suffice unless the nasal bridge is refractured

2. Safian, J.: Corrective Rhinoplastic Surgery. Paul B. Hoeber, 1935.

and set in the midline. Should the deformity involve only the septal cartilage it will be necessary to remove the projecting end of the septum if it be too long thus shortening the nose or do a conservative operation on the septum itself. The object of the latter is to straighten the curve in the septum without removing any of the cartilage This is accomplished by elevating the muco-perichondrium on the convex side all the

Fig. 8. Combination of bony hump, twist and long nose. Hump removed by saw, nose straightened by infraction of nasal bones. Nose shortened.

way from the base to the dorsum. It may even be necessary to dissect the cartilage free from its attachment to the dorsal skin in cases where the cartilage is twisted off the midline. As long as the cartilage remains attached to the muco-perichondrium of the opposite side its vitality will be preserved and it can be manipulated as desired. The curve in the cartilage is eliminated by one or more incisions running the length of the curve and where the cartilage is in excess, a strip may be removed by means of Cavanaugh's spokeshave or sharp elevators, the objective being to take the spring out of it so that it can be set in the midline where it belongs. It is occasionally necessary to employ Metzenbaum's technique of replacing the free septal border behind the collumella in cases where this border lies free in one nostril and where shortening the nose is not indicated. In any event following the operation it is well to pack the previously convex side so as to overcorrect the deformity. Such a pack may be left in place for 48 hours and if necessary can be replaced by a plug of dental wax for an additional 2 to 4 days.

Should the septum be deviated in its bony portion, such deviation can be corrected at the same sitting. It is necessary then to detach the cartilage at its base and incise it posteriorly where it joins the perpendicular plate. It is then held aside by a Killian speculum while the deflected bone below and posterior is removed in the usual way.

The subject of septal deviation in association with other nasal deformities especially those involving the bony framework is one that requires especial study. In some quarters there is a disposition to leave the septum alone while correcting a crooked nose and in others it is recommended that the resection be performed preliminary to the nasal refracture. In my opinion it is unwise to do either. A preliminary septal resection may weaken the framework of the nose to such an extent that subsequent refracture may result in a sinking of the cartilaginous portion, whereas a resection that is deferred to a later date may never be done because the patient is unwilling to undergo a second operation. Besides a twisted septum may actually cause a recurrence of a nasal twist despite a refracture because of the elasticity of the cartilaginous portion. In my own cases, therefore, I have found it expedient to correct the septal deviation in one sitting with whatever operation may be required for the nasal bridge. Only, instead of removing the septum as is the usual custom, I make it a point to preserve as much of the cartilage and bone as is consistant with establishing a satisfactory airway. By removing strips of cartilage as recommended by Cavanaugh and infracting the projecting bony portions one can get away with but a minimum of tissue removed and thereby retain a firm septum sufficient

to maintain the contour of the nose. This work is always done first and is then followed by the necessary procedures on the external framework.

The removal of a nasal hump is in most instances a rather ticklish problem. A very slight prominence of a thin nasal bridge can be readily obliterated by the use of a rasp. But the same elevation on a broad nose will not only defy the rasp but often leave a broader and uglier looking nose. Any hump, small or large that is associated with a fairly broad nose necessitates infraction of both nasal bones in order to narrow the bridge and make it commensurate with the lowered profile. This infracting of the nasal bones is accomplished by sawing through subperiosteally on both sides and pushing the bones medially by pressure of the thumb.

A word of caution regarding the use of the rasp. Experience has taught us that too energetic use of this instrument is fraught with danger. It frequently results in stimulating new bone formation so that the original hump is often replaced by a thick broad bony mass. Also it is difficult to completely remove the fine bony fragments which remaining behind may be implanted in the exposed raw bone and develop new tissue. Anything more than a slight hump must be removed by other means. One has the choice of saws or chisels. The latter accomplish the task more cleanly but are difficult to control as to depth. Many chisels have been devised to overcome this handicap but the fact nevertheless remains that it is extremely difficult to guide a chisel blindly underneath the skin so as to take off just the required thickness. The saw is more easily applied and possesses the additional advantage of taking off the protuberance in one piece frequently with the cartilaginous portion so as to result in one straight line. It is necessary to have the skin and periosteum well elevated so that a retractor will expose the bony and cartilaginous dorsum to the operator's inspection. He will then be in a better position to place the saw accurately and subsequently to shave off any uneven cartilaginous projections. These little niceties come with experience but can be acquired through careful and painstaking attention to detail.

Following any operation on the framework of the nose where the skin and periosteum have been elevated it is important first of all to remove all debris such as bone dust, chips of cartilage and clots at the close of the operation and then to apply some sort of pressure that will keep the soft tissues in accurate and smooth contact with the underlying bone. Various appliances are used for this purpose. My own choice is the molded copper splint padded with two layers of lint which I have described in a previous article.[3] This is retained for 24 to 48

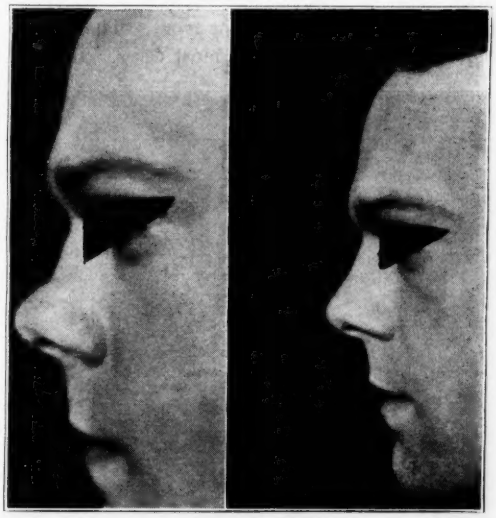

Fig. 9. Congenital saddle nose. Correct by single ivory implant.

hours and if necessary may be worn for 10 days to 2 weeks. The prolonged wearing of this splint is required only where the nasal bones have been infracted and it is necessary to prevent spreading. In such cases it is removed every other day and readjusted with clean padding before being replaced.

A few more words on the subject of saddle nose. The material to be employed depends not only on the surgeon's particular fancy, but on the type and location of the defect. Saddle deformities of slight degree may be nicely filled with auricular cartilage. A narrow strip of cartilage may be removed from back of the auricle without endangering its integrity and is usually well borne in its new bed. One must, however, be extremely careful to control all bleeding and to apply firm pressure to the auricle for several days in order to prevent a possible hematoma. For larger depressions auricular cartilage will be found insufficient and one must

3. Salinger, S.: The Copper Molded Splint. Arch. of Otolar, 20: 211, 1934.

then choose between bone, costal cartilage or ivory. Bone transplants, either tibial or costal, require especially careful technique and are more likely to be absorbed or yield to infection than costal cartilage alone. Yet in the hands of a few they have accomplished the purpose remarkably well and must be considered in cases where the saddle deformity is due to a deficiency in the bony nasal structure. Otherwise it is far better to rely on costal cartilage or ivory. There is no objection to the former in most cases. In some

Fig. 10. Depressed tip due to former septal abscess. Corrected by two interlocking ivory implants.

instances, however, ivory is preferable. This applies particularly to those cases where the nasal tip has sunk because of loss of the cartilaginous septum from a previous septal abscess. Here it is necessary not only to fill the dorsal defect but to prop up the tip with a firm material. Two interlocking ivory implants along the lines which I described in 1931,[4] fulfill this object in the vast majority of cases. Time will not permit a more extended discussion of the relative merits and disadvantages of ivory. That is a matter on which I could spend at least an hour. Suffice for the present that my experiences during the past ten years covering over one hundred ivory implants have been in the main extremely gratifying and I should like on some future occasion to point out some of the lessons I have learned which might prove helpful to those who contemplate using this material. These cover such angles as the kind of ivory to be used, its method of preparation, technique of insertion and above all the selection of cases where it is best adapted.

Another topic which merits special consideration is the management of recent nasal fractures, a subject which has received some considerable attention in recent years but is still far from being exhausted. Many rhinologists are to this day rather vague in their ideas of how to handle these cases, particularly in children and also as to the procedure in instances where the nasal fracture is associated with other injuries.

In closing I desire again to emphasize the importance of every rhinologist informing himself on the subject of rhinoplastic surgery, not only because he may find certain procedures adaptable to his practice and within the scope of his surgical ability but also because he will be in a better position to discuss the matter intelligently with those who seek his advice and finally because it is an extremely interesting and absorbing topic.

25 East Washington Street.

4. Salinger, S.: Ivory Implants for Saddle Nose: Results in Fifty Cases. Annals of Otol., Rhinol. and Laryngol, **40**: 801, 1931.

THE SURGICAL ANATOMY AND ESTHETIC EFFECTS OF SUBMUCOUS RESECTION

ADOLPH M. BROWN, M.A., M.D.

CHICAGO

Submucous resection is ordinarily considered one of the most conservative of intranasal operations, for the following reasons: It involves a small incision, the edges of which close very readily. Convalescence takes place in a short time. Except for an occasional perforation the operative risk is minimal. The same general procedure is adaptable to the majority of deviations.

In spite of these advantages, T. R. French,[1] as early as 1906, emphasized that this operation was not the only one for septal deformities.

The number of submucous resections resulting in nasal deformities renders this problem important. This operation has been performed for many years and for many conditions, some of which have no direct connection with the nose. Its most common purpose is to obtain an

Read before the Edgewater Hospital Staff, Chicago, Nov. 19, 1935.

1. French, T. R.: *New York Med. J.*, **84**: 1016, 1906.

adequate air passage. Deviations of the nasal septum are multiple and complex in form and extent. The parts of the structure involved vary according to the seat of the deviation. Therefore, the most rational classification of deviations is based on the anatomy of the septum.

Among the usual types of deviations are:

1. Anterior deviation (cartilaginous),
2. Posterior deviation (bony),
3. High deviation (near the ethmoid),
4. Spurs, crusts, or thickening, (not true deviations of the septum).

There are many variations of the above deformities as to size, arrangement and position. For instance, the irregularities due solely to trauma may range from simple anterior deviations to accordion pleated deviations and fractures.

Deviations complicated by other nasal anomalies, such as hypertrophied turbinates, usually indicate to the surgeon the necessity for the usual submucous resection, to obtain an adequate air passage.

The usual submucous resection is commonly performed regardless of the variety of deviation. In other words, we resort to one rather extensive operation, with its various anatomic and esthetic hazards, for relief of a variety of septal conditions. It has been complacently assumed that this operation is the only one for septal deformities.

In the attempt to get a perfectly straight septum the temptation is great to remove more of the cartilage than is safe, and sunken noses are often the result of such radical removal. It is the purpose of this paper to illustrate how deformity of the external nose in its anteroposterior dimension may result from operations to correct these lateral deviations of the septum.

The contour of the nose depends upon the underlying cartilage and bone. The root of the nose is supported by the nasal bones. But the nasal bones support only the upper two-fifths of the nasal pyramid. The nasal cartilages help, in a measure, to support the fleshy part of the nose, but the contour of the lower three-fifths of the nose is dependent almost entirely upon the extent of protrusion of the nasal septum.

The anatomy of the septum, therefore, assumes surgical importance because of its influence upon the shape of the fleshy part of the nose. The beauty or ugliness of the nose may depend upon the extent and type of septal support it receives.

The septum is a plate of bone and cartilage, and extends from the posterior nares to the tip of the nose. It is an irregular oblong: it is wider posteriorly and narrower anteriorly. Anteriorly, it can be felt as the free border above the columellar cartilage. Posteriorly it ends at the nasopharynx. It fits into the maxillary groove below. An anterior-superior border can be felt through the fleshy ridge of the nose, and it will be noted that this border is slightly thicker than the balance of the septum. Anteriorly the septum is entirely cartilaginous. The middle portion is the very thin vomer. The anterior septum and the vomer merge above with the anterior plate of the ethmoid. Posteriorly the septum ends as it meets and joins the septal extensions of the palatal bones.

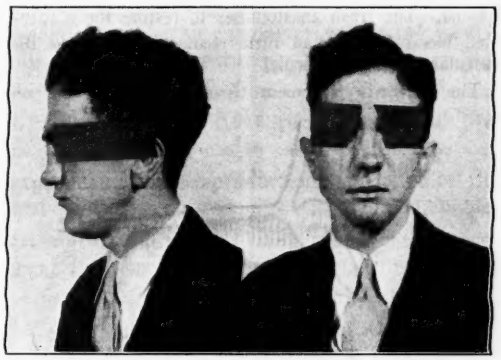

Fig. 1. Cosmetic result after repeated extensive submucous resections.

Two points regarding the septum are important. One is that the columellar cartilage is very weak and not rigid enough to support the nasal tip or nasal ridge if the septal support is removed. The other point is that the septal-nasal-bone junction is very weak, and avulsion of this osteochondral synarthrosis during submucous resection may result in a collapsed nasal pyramid.

A typical case will illustrate a number of factors involved (Fig. 1)

L. H. White, aged 25 years. Seen Aug. 15, 1935: Is very sensitive about the shape of his nose and seeks cosmetic correction. He states that he suffered a nasal fracture at the age of four or five, and there was no post-traumatic deformity. (The diagnosis of fracture

here is questionable. The nasal bones at this stage of development are cartilaginous in consistency, gristly, and show some pliability.)

At the age of fourteen, he was operated on for deviated septum, and shortly after noticed that his nose began to collapse. He was very sensitive about this deformity. At the age of twenty, another doctor operated and resected still more septum. The nose is now almost completely collapsed.

The patient is introspective and discouraged. He is backward socially because of his facial disfigurement.

Physical examination gives the following findings: The septum is rather pale, the air passage is still deficient. The resected septum is replaced by fibrous tissue. The nose presents an almost "dishface" deformity. The bridge is very much flattened, the nasal root is slightly flattened and thickened, with a collapsed nasal ridge. The nasal tip extends forward and downward slightly. Widened and flattened alae. Beyond any doubt this man's deformity is due to removal of too much septum. The entire condition is clearly attributable to overzealous submucous resection.

The paleness of the septum is due to the unjustified trauma. The fresh anastomoses to restore the obliterated blood vessels had little chance of restoring the vascular septum to normal.

The fibrous replacement tissue bears the same relation to the perichondrium and periosteum as previously.[2]

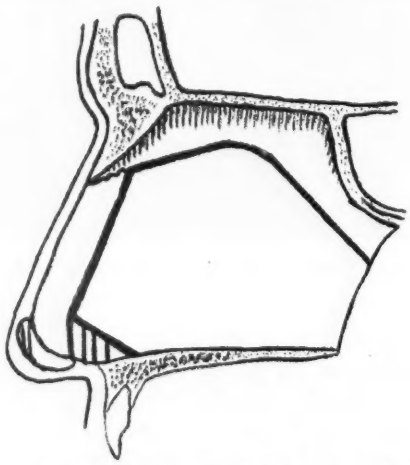

Fig. 2. Reproduced from a textbook. Extensive anterior resection invites collapse.

The collapsed nasal ridge is directly traced to the removal of the septal support. The columellar cartilage, intact, extends the tip of the nose forward, enhancing the grotesque effect.

But the load is too great for the columella, and it is bent downwards; as a result the alae are flattened against the face. (Fig. 2).

Most text-books exhibit diagrams showing how much septal cartilage may be "safely" removed. The illustration here shown (Fig. 2) is reproduced from a standard work. If the amount of cartilage "safely removable" as here shown, is excised the architecture of the nose cannot remain normal. It will collapse, to the mortification of the patient and the chagrin of the operator.

Leaving only the narrow anterior ribbon of cartilage to support the lower three-fifths of the nasal cone, is poor cosmetic "engineering." The septal cartilage must be visualized as a central buttress to support the lower three-fifths of the nasal pyramid. It is even when intact a weak support.

If only this thin ribbon is left, as is illustrated, the support normally transferred upward and forward through the body of the septum is gone. The narrow ribbon of cartilage remaining acts as a very weak strut, with its support only the synarthrosis with the nasal bones, above, and below from the columella. The columella is weak. In collapsed noses it may bend with the deviation of the septum, or arch itself with the convex side downward.

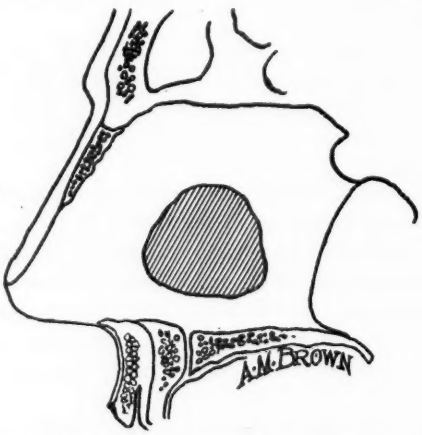

Fig. 3. Illustrating a conservative cosmetic resection, leaving an adequate bony and cartilaginous ring around the resected area.

As usually performed, the swivel knife is used by some operators, and septum forceps by others. Some use both. The septum forceps should not be used anywhere near the septo-nasal bone synarthrosis, because avulsion near this point may tear the synarthrosis loose, and cause recession of the nasal ridge and concomitant prom-

2. Babbit, J. A.: J. A. M. A., 63: 1822, 1914.

inence of the bridge. Avulsion of septal cartilage is always a cosmetically risky procedure.

Resection by means of avulsion of the septal cartilage and bone is inaccurate, sometimes "messy," and leaves the operator without control. Conversely, removal of the obstructing portion of the septum only cannot be praised too highly, especially if performed with a swivel knife, which renders the procedure safer because of the control factor.

The authoritative dictum concerning the removal of only the offending portion of the septum is correct from two standpoints: 1. It accomplishes the purpose of clearing the air passage, especially if the resiliency of the flaps is broken up. 2. It is a cosmetic safeguard for the nasal profile.

Too often a cosmetic disaster is due to inexperience or caprice of the operator who approached the bridge of the nose too closely. In the attempt to get a perfect airway, the temptation is very great to remove more of the cartilage than is safe, and sunken noses, as described, result from such radical removal.

It should be seriously borne in mind that if there is any danger that submucous resection will cause collapse, it is more purposive to increase the airway by other methods. The turbinate can be obliterated for an airway. Polyps may be found and removed, and adenoidectomy should not be overlooked.

Some rhinologists deliberately perform a submucous resection to "improve" a prominent nose. This is seldom if ever justified. The writer has seen such cases. Perhaps these operators feel that they are at least removing some nasal tissue, and the removal will decrease the anteroposterior dimension of the nose. This procedure must be condemned. Study of the anatomy will reveal that only two possibilities are to be expected: One is that the resection will not be extensive and fortunately will have no effect on the nose esthetically. The other possibility is that the operation will be extensive enough to lessen the anteroposterior dimension of the septum, and the crest of the nose will sag for lack of support, with eventual collapse. The nasal bones, left untouched, will be thrown into sharp relief, causing a sharp "eagle beak" profile, and the alae, left unsupported by their normal buttress, the septum, will be flattened against the cheeks. Thus, although the inexperienced operator has achieved his poorly conceived aim and reduced the anteroposterior measurement, with the accentuated bridge, flattened alae and collapsed tip, the patient is left with a cosmetic defect bringing grief even to individuals who are indifferent about their appearance.

The age of the patient is important. No submucous resection should be performed before the patient has reached the eighteenth year.

Deviations of the anterior septum require exceedingly careful investigation. Very often they are accompanied by a "hanging columella," which is unsightly. Here the experienced surgeon with an artistic eye can accomplish cosmetic good. In such cases it is best to excise the wedge of offending cartilage, leaving the columella intact, and resuturing it to the lower border of the septum and over correcting the nasal tip to allow for shrinkage. It is best to prepare casts of the nose in cases of this type and experiment with reproductions made from the cast until the desired effect is obtained, before attempting operation. The cosmetic improvement in cases of this type is startling, and the patients are always gratified. In other words, for anterior deviations with hanging columella, a submucous resection will be of no cosmetic benefit. For a prominently deviated columella, the plastic operation positively resecting the hanging septum is indicated.

Summary

1. The surgical anatomy of the septum is discussed.

2. The esthetic hazards of submucous resection are emphasized.

134 N. La Salle St.

Due in a large part to the doctors themselves, the prevailing thought about town is that no one pays for his medical service. This is largely brought about by the manner in which physicians continually bemoan to the laity about no one paying his bills. If Mr. Smith hears that Mr. Jones and Mr. Brown never pay, and can always receive medical attention just the same, he naturally figures, "Why should I pay?" We should assume an attitude that most people pay, and that those who do not are being temporarily cared for, due to hard times.—*Luzerne County Medical Bulletin.*

A STATISTICAL STUDY OF THE OBSTETRICAL PRACTICE IN A SMALL CITY HOSPITAL

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URBANA, ILL.

During the last few years, a great deal has been said and written regarding maternal and infant mortality and morbidity as related to obstetrical practice. It, therefore, seemed to be of clinical and perhaps of scientific interest, to make a careful statistical survey of the obstetrical experience of a small city hospital, since most of the reports come from the large metropolitan areas. The survey embraces the two years, 1932 and 1933, and a comparison of the two years is given. While the number of cases studied is of necessity small so that no very profound conclusions can be arrived at, nevertheless, several interesting observations have been made.

The institution from which the report is made,* is a 74 bed general hospital, located in an urban population of about 30,000. It is the largest of four general hospitals in the community. Part of the hospital's revenue comes from city taxes and the institution is under the direction of a Board of Trustees appointed by the Mayor of the city. There are no free beds in the hospital. There are about 40 physicians regularly in attendance, and of this number, 25 constitute a regularly organized staff which meets monthly for scientific discussion. None of the physicians in attendance at obstetrical cases limit their practice to obstetrical cases but are general practitioners of medicine and surgery. A training school of 40 nurses makes up the undergraduate nursing personnel and a staff of 9 graduate nurses is in charge of the hospital management and training school.

The following is a summary of the statistical study:

	1932	1933	Per Cent 1932	Per Cent 1933
1. Total labors	196	200	....	....
Para 1	104	103	53.06	51.50
Para 2	54	51	27.55	25.50
Para 3	18	22	9.18	11.00
Para 4	11	13	5.66	6.50
Para 5	4	5	2.00	2.50
Para 6	0	3	0.00	1.50
Para 7	4	2	2.00	1.00
Para 8	0	1	0.00	0.50
Para 11	1	0	0.50	0.00
2. Baby's sex:				
Male	95	98	48.00	49.00
Female	101	102	52.00	51.00
3. Maternal deaths	0	2	00.00	1.00
4. Stillborn	7	5	3.57	2.50
5. Fetal deaths within 48 hours	5	2	2.55	1.00
6. Cesareans	4	10	2.04	5.00
7. Low forceps	30	30	15.30	15.00
8. Midplane forceps	10	11	5.10	5.50
9. High forceps	8	7	4.10	3.50
10. Version	2	1	1.02	0.50
11. Breech	6	6	3.10	3.00
12. Face	1	0	0.51	0.00
13. No lacerations	66	94	33.67	47.00
14. Episiotomies	43	44	21.94	22.00
15. Lacerations:				
First degree	48	28	24.49	14.00
Second degree	37	20	18.88	10.00
Third degree	2	1	1.02	0.50
16. Maternal temperatures over 100 degrees	63	69	32.14	34.50
17. Average weight of babies exclusive of stillborn	Lbs. 7½	Lbs. 7½		
18. Duration of labor from time of admission to delivery:	Hrs.	Hrs.		
Para 1	10¾	12¾		
Para 2	6	5½		
Para 3	7¾	7¼		
Para 4	11	10¼		
Para 5	12¼	10¼		
Para 6	..	6¼		
Para 7	10¼	9¼		
Para 8	..	4		
19. Average days in the hospital	Days 9¼	Days 8½		
20. Maternal Ages:	Years	Years		
Para 1	25	24½		
Para 2	28	27		
Para 3	31	28½		
Para 4	32½	31		
Para 5	33½	34		
Para 6	..	33		
Para 7	38½	36		
Para 8	..	40		
Para 11	41	..		

It should be stated that there was no attempt in the survey to correlate definitely the rise in the maternal temperature with any particular pathological process. Below will appear a summary of the abnormal conditions found in those cases running a temperature above a hundred degrees sometime during their stay in the hospital.

It should also be stated that in determining the duration of labor the records did not state the actual time of the beginning of labor. As a result, the length of labor was figured from the time of admission to the hospital to the time of delivery.

A more detailed and comprehensive explanation of certain features is given below.

Stillborn cases in 1932:

1. Cord around the neck. Para 1. Labor normal.
2. Breech. Para 4.
3. Abdominal pregnancy with Caesarian. Para 11.
4. Eight-month pregnancy. Para 2.

*Burnham City Hospital, Champaign, Illinois.

5. Breech. Delivery except head on way to hospital. Para 2.
6. Premature. Eclampsia. Para 1. Age 30. Labor induced with bag.
7. High forceps. Para 1. Age 42.

Stillborn cases in 1933:

1. Cord around the neck four times.
2. Version following unsuccessful forceps. Contracted pelvis. Para 1. Age 26.
3. High forceps. Large head. Para 1. Age 28.
4. Premature, three months. Premature rupture of membranes. Transverse position.
5. Premature separation of placenta. Seven and a half months pregnancy.

Other fetal deaths within forty-eight hours in 1932:

1. Convulsions. High forceps. Weight eight pounds seven ounces. Para 1. Age 32. Labor thirty-one hours.
2. Lived ten minutes. Para 1. Age 25. Quinine and castor oil after two days of false pains.
3. Head injury. Occiput posterior. Mid-plane forceps. Para 1. Age 24. Labor thirty-three hours.
4. Premature two and a half months. Placenta prævia.
5. Premature. Weight three pounds. Breech delivery.

Other fetal deaths within forty-eight hours in 1933:

1. Premature, three and a half months. Breech. Para 4. Age 24.
2. Forceps. Occiput posterior. Para 1. Age 21.

There were two more fetal deaths in 1933 during the stay of the mother in the hospital. One was a case of jaundice and poor breathing. Baby never nursed. Second case died on the sixth day, was premature two and a half months.

In 1932, there were no maternal deaths. In 1933, there were two cases: first, Para 7, age 37, breech delivery, severe hemorrhage, transfusion, death on fourth day; second, Para 1, age 25, death on twenty-third day of bacterial endocarditis.

Cesareans; 1932:

1. Abdominal pregnancy.
2. Breech. Contracted pelvis.
3. No indications given.
4. No indications given.

Cesareans, 1933:

1. Fibroids.
2. Contracted pelvis.
3. Contracted pelvis.
4. Pre-eclampsia. Contracted pelvis. Premature rupture of bag of waters.
5. Contracted pelvis.
6. No indications given.
7. Placenta prævia. Premature rupture of bag of waters.
8. No indications given.
9. Contracted pelvis. Fibroids.
10. Bronchitis. Anemia.

Low forceps in 1932:

Para 1. 25 cases. 5 cases labor longer than 16 hours.
Para 2. 2 cases.
Para 3. 2 cases.
Para 7. 1 case.

Low forceps in 1933:

Para 1. 17 cases. 4 labors longer than 16 hours. One case with temperature of over 101 without determined cause.
Para 2. 2 cases.

Mid-plane forceps in 1932:

Para 1. 8 cases.
Para 2. 2 cases.

Mid-plane in 1933:

Para 1. 9 cases.
Para 2. 2 cases.

High forceps in 1932:

Para 1. 8 cases. Two, occiput posterior.

High forceps in 1933:

Para 1. 5 cases. One, occiput posterior.
Para 2. 2 cases. One, occiput posterior.

Versions in 1932:

1. Para 1. Age 25. Bag induction. Unsuccessful forceps delivery.
2. Para 1. Age 20. Placenta Prævia. Two and a half months premature.

Versions in 1933:

1. Para 1. Age 26. Narrow pelvis. Unsuccessful forceps delivery.

Breech deliveries in 1932:

Para 1. 2 cases.
Para 2. 2 cases, one delivering except head on way to hospital.
Para 4. 2 cases.

Breech deliveries in 1933:

Para 1. 1 case. Bag induction, following castor oil and quinine.
Para 3. 1 case.
Para 4. 2 cases, one premature three and a half months.
Para 5. 1 case, premature, two and a half months.
Para 7. 1 case, followed by severe hemorrhage.

	1932	1933
No lacerations:		
Para 1	17 cases	30 cases
Para 2	24 cases	23 cases
Para 3	10 cases	20 cases
Para 4	7 cases	10 cases
Para 5	4 cases	5 cases
Para 6	None	3 cases
Para 7	4 cases	2 cases
Para 8	None	1 case
Episiotomies:		
Para 1	35 cases	37 cases
Para 2	6 cases	7 cases
Para 3	2 cases	None
Lacerations, first degree:		
Para 1	28 cases	13 cases
Para 2	14 cases	13 cases
Para 3	4 cases	1 case
Para 4	2 cases	1 case
Lacerations, second degree:		
Para 1	25 cases	14 cases
Para 2	8 cases	4 cases
Para 4	2 cases	2 cases
Lacerations, third degree:		
Para 1	2 cases	1 case

Patients who ran temperatures over 100 while in hospital:		
Forceps	27 cases	15 cases
Version	2 cases	None
Bag or pack induction	4 cases	None
Manual removal of placenta	3 cases	3 cases
Low hemoglobin	2 cases	None
Sore throat	1 case	None
Caesarian	3 cases	9 cases
Phlebitis	1 case	1 case
Septic temperature?	1 case	None
Subinvolution	1 case	None
Stillborn	1 case	3 cases
Breech	2 cases	2 cases
Prolapsed cord	1 case	None
Premature separation of placenta	None	2 cases
Mastitis	None	1 case
Mastitis with suppuration	None	1 case
Bacterial endocarditis	None	1 case
Cystitis	None	1 case
Bronchitis	None	1 case
Premature rupture bag of waters	None	1 case
Arrested pulmonary tuberculosis	None	1 case
Cause undetermined	14 cases	27 cases

As stated above, no attempt has been made definitely to assign these causes as the explanation for the temperature, but they appear to be the most plausible. Other noteworthy features:

	1932	1933
Hairlip	1 case	None
Premature stillborn:		
Mother had severe mitral and kidney lesions and previously had been insane	1 case	None
Abdominal pregnancy stillborn	1 case	None
Castor oil and quinine induction	10 cases	2 cases
Gauze packing induction	3 cases	None
Bag induction	3 cases	1 case
Placenta praevia	2 cases	None
Subinvolution	1 case	None
Post-operative hernia	1 case	None
Prolapsed cord	1 case	None
Preeclampsia	3 cases	3 cases
Chronic nephritis	1 case	None
Club feet	None	2 cases
Hyocine and morphine	None	1 case
Imperforate anus	None	1 case
Hemorrhage on eleventh day	None	1 case
Premature separation of placenta	None	1 case

CONCLUSIONS

1. Maternal death rate in 1932 was 0%; in 1933, 1%; for the two years 0.5%.
2. The stillborn rate in 1932 was 3.57%; in 1933, 2.50%: for the two years was 3.03%.
3. Infant deaths within 48 hours in 1932 was 2.55%; in 1933, 1%; for the two years 1.77%.
4. Total infant mortality for the two years was 2.41%.
5. The maternal morbidity as compared with other reports appears to be average or below.
6. The incidence of operative interference, as compared with other reports was average or below.
7. There appeared to be a definite correlation between the development of fever in the mother and operative interference.
8. There was a most interesting, yet unexplainable relationship in the comparative figures of the two years, in the duration of labor in the various groups classified as to parity.

TRANSURETHRAL PROSTATIC RESECTION

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A subject that has gained such tremendous popularity in so short a time must be worthy of any discussion or consideration, especially since it tends to revolutionize prostatic survey to such an extent that Moore, in a recent paper, asked if prostatectomy is to become obsolete since the advent of the transurethral method of removing the prostate.

Historical Data: The consideration of the various instruments that have been devised for the transurethral relief of bladder-neck obstruction since their recognition as a pathological entity is very interesting. Guthrie, in 1830, devised his cutting knife concealed within metal catheters. Bottini, in 1870, introduced his cautery incisor. Wishard, in 1890, cauterized the prostate under direct vision through the perineum. Freudenberg, in 1897, and Chetwood, in 1901, modified the Bottini instrument. Young, in 1908, presented his prostatic punch. Beer, in 1910, introduced fulguration as a means of destroying benign papilloma of the bladder and he, as well as Stevens and Bugbee, reported cases of bladder-neck obstruction treated by fulguration. Caulk, in 1920, substituted a cautery for the tubular knife in the Young punch making it possible to take a deeper bite of tissue and to control hemorrhage.

From this time on the popularity of transurethral prostatic resection was only made possible by the many improvements in the lens systems of the operating cystoscope or resectoscope and the development of high frequency machines. Stern, in 1926, presented his resectoscope which was later modified by Davis and they removed the prostatic obstruction by "guttering" through the tissue as it became engaged within the fenestrum. Bumpus at about the same time presented his modification of Braasch's

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cystoscope which coagulated the tissue to be removed by multiple needle electrodes thereby rendering it ischemic before its excision. Collings, in 1926, presented the first cutting current apparatus in this country, called the "radiotherm." McCarthy, in 1931, modified his panendoscope with a bakelite non-conducting sheath and a new cautery loop. This instrument with its precise visualization of the prostatic urethra soon became the instrument of choice by most urologists. Other instruments which were presented include the Foley cystoscope with which he could remove most of the prostate by means of a fine wire electrode, Day's prostatic punch with needle electrodes and Kirwin's rotary resectoscope.

At the present time we can say that the success of transurethral prostatic resection is due to the fact that for the first time a method has been developed which gives the operator good vision, means of controlling hemorrhage perfectly and of removing accurately that portion or portions of the prostate causing obstruction. Good vision with the resectoscope is made possible by means of three lens systems: the foroblique, the indirect and the retroversion; so that the gland can be viewed from every possible angle and direction, thereby enabling one to accurately determine the obstructing portion of the gland. The most recent electrosurgical units, such as the Liebel-Flarsheim, McCarthy or Burdick, are operated by a foot pedal and consist of two separate currents: a powerful cutting current for the removal of prostatic tissue which is a vacuum tube appliance producing continuous or undamped oscillations of high frequency; and a coagulating current for the control of hemorrhage, which is a highly damped spark gap producing interrupted or damped oscillations of high frequency.

Selections of Cases: There has been considerable discussion as to which types of bladder-neck obstructions should be resected and which subjected to open operation. Some time ago the prevailing impression among urologists was to limit resections to bars and contractures of the bladder-neck, small middle-lobe enlargements and carcinoma of the prostate; but since then, as the experience of the operator increased, all types of bladder-neck obstructions were included by such men as Caulk, Davis, Alcock, Bumpus and Moore. They only exluded those cases in which the instrument could not be introduced into the bladder. On the other hand such men as Young, Keyes, Lowsley and others still hold the conservative view of selecting cases for resection. My views on this subject are in accordance with the latter group.

Mention must be made of a very important group of cases to which prostatic resection has opened up an avenue of relief. I have reference to those old debilitated prostatics with cardiac disease and poor renal function from whom surgical intervention has been withheld.

Preoperative Preparation: The same care and consideration must be given to patients to be resected as to those undergoing open operation. Infections should be eliminated if possible and renal function impairment is best treated by preliminary drainage instituted in most cases by indwelling urethral catheter or by suprapubic cystotomy in some cases. Cardiovascular diseases are found to be present in a large number of patients with bladder-neck obstruction and the proper medical treatment should be administered.

It has been our practice to give no preliminary treatment only to those patients with residual urine of not more than 200 c.c., in whom the renal function is normal and little or no infection exists. In all other cases an indwelling catheter is inserted and a vasectomy as a prophylaxis against epididymitis is performed. When the renal function and blood chemistry are within normal limits, infection is cleared and the cardiovacular impairment greatly improved, then is the patient ready for resection.

Suprapubic cystotomy, as a preliminary method of drainage, was done in over 15% of our cases. It was performed in severe bladder infections which could not be controlled by indwelling catheter, cases where the indwelling catheter produced marked local reactions and in conjunction with bladder diverticulæ and large vesical calculi. In one case of a recurrent carcinoma of the prostate with a spontaneous suprapubic fistula resection was successfully done and the fistula healed. In the series of cases reported from the Mayo Clinic, 12% of them were treated by preliminary suprapubic cystotomy.

Anesthesia Employed: The anesthetic used should be the least toxic to the patient and in

our experience spinal injection of 50 to 100 mg. of procaine and hypodermic injection of ephedrin for the usual drop of blood pressure has given us most satisfactory results. Caudal anesthesia has also been used with good results but any other form of anesthetic has rarely been employed.

Tissue Removed: The amount of tissue removed has little relation to the result obtained and practically no relation to the total size of the gland. The secret is in not seeing how much tissue can be taken out but rather to determine accurately exactly what part or parts are causing the obstruction and then removing that obstruction completely. In some prostates this requires the removal of only a small amount of tissue while in others it may mean a considerable amount. Thompson reports that in about 26% of cases the removal of less than 5 gms of tissue sufficed to eliminate residual urine, while in 10% of cases it was necessary to remove more than 25 gms of tissue. In one case 116 gms of tissue were removed. Alcock reports the average weight of prostatic tissue removed to be about 38 grams. Since we still select our cases to be resected and do not include those large prostatic hypertrophies, our average amount of tissue removed is about 10 gm.

Postoperative Care: The postoperative care in addition to the usual supportive care and forcing of fluids should include measures to avoid prolonged hemorrhage. Drainage by indwelling catheter for 72 hours is usually sufficient. Frequent bladder irrigations with warm boric or saline solutions will minimize formation of clots. Two-hour specimens of urine for the first 24 hours will reveal grossly the degree of hemorrhage. The catheter should be removed on the morning of the third day. If the patient cannot void or voids with difficulty, it is reinserted for 24 hours. The inability to void at this time is indicative of insufficient removal of prostatic tissue and reoperation is done. The presence of over 200 cc. of residual urine after continued hot Sitz baths is likewise an indication for reoperation. Second resections had to be done in 13.6% of cases at the Mayo clinic. It was not necessary to resect any of our patients a second time.

COMPLICATIONS:

(A) *Hemorrhage:* Immediate postoperative hemorrhage is generally of minor importance due to the care that was exercised in the control of bleeding at the time of resection. Occasionally an overlooked bleeder, which cannot be controlled by urethral catheter, must be recoagulated. In rare cases of active hemorrhage with the bladder filled with clots which cannot be readily evacuated suprapubic cystotomy must be done as an emergency procedure.

Delayed postoperative hemorrhage appearing from 10 to 20 days after resection in most cases can be controlled by an indwelling catheter, or in some cases by the evacuation of the clots with a Bigelow pump and bladder irrigations of warm permanganate solutions. Suprapubic cystotomy for the control of hemorrhage has not been necessary in our cases. Caulk and Harris have shown by microscopic section that the pathologic changes observed following high frequency applications exhibit three distinct zones of damaged tissues: a zone of coagulation and complete cell destruction; a zone of fragmentation, hemorrhage, cell shrinkage and pronounced nuclear changes; and a relatively normal zone, which is most variable of the three and depends chiefly upon the time element. Specimens taken immediately or shortly after high frequency applications may exhibit no demonstrable histologic evidence of cell change in this zone, but after a few days may reveal definite nercrosis. This deep heat effect is responsible for late sloughs and erosion of vessels causing secondary hemorrhages and infections.

(B) *Infection:* Although the lymph channels and blood vessels are sealed by coagulation incident to hemostatis, postoperative infection should be infrequent, yet cases of pyelonephritis, periurethral and prostatic abscess, periprostatic infection, phlebitis, urinary extravasation, retroperitoneal abscess and more commonly epididymitis have been reported.

(C) *Accidents:* Rupture of the bladder due to overdistention, perforation due to explosive gases have been reported as well as resection of the trigone, perforation of the urethra and bladder-neck.

(D) *Miscellaneous:* Other complications reported by various authors include stricture of urethra due to unnecessary trauma and incontinence resulting from resection of the external sphincter at time of operation.

Mortality: When first attempted, the mor-

tality following transurethral prostatic resection was reported to be as high as 25% in the first hundred cases, but as the result of experience of the individual operators, as many as three to four hundred successful resections have been done without a death. At the present time 3 to 5% of mortality is the usual result reported by urologists throughout the country. Caulk and Davis reported less than 1% mortality. Our mortality was slightly less than 3%. One patient died from urinary extravasation and two from pyelonephritis.

Hospitalization: Another advantage of transurethral prostatic resection is the greatly reduced period of postoperative illness and hospitalization which averages about 10 to 14 days while prostatectomy patients average about four to six weeks. The last private case done in this hospital remained six days.

As to the future of transurethral prostatic resection I fully agree with the recent views expressed by Alcock:

> "I believe that in the end it is going to be found that the question as to whether resections or prostatectomies are going to be done will be determined not by the general surgeon or the urologic surgeon but by the home physician. He is the man who sees the ultimate and final result and he is the one who is going to determine which of those operations his patients are going to have."

Cases from the Urological service of Dr. L. L. Veseen are also included in this series.

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SOME PRESENT DAY CONSIDERATIONS ON SYPHILIS

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There are three points relative to congenitial syphilis which I would like to stress.

Prevention: If a questionnaire were sent to persons well informed on congenital syphilis and they were asked what single point they consider most important relative to this disease, I think the unanimous answer would be: its prevention. The good results of prevention of congenital syphilis by treatment of syphilitic pregnant women are generally agreed upon by those informed on this subject.

It is not necessary to dwell on the destructive effect of syphilis on the product of pregnancy. It is very well known that in the past it had been the greatest cause of spontaneous abortion after the fourth month, the most frequent cause of still-birth and neonatal death. The late J. W. Williams, Professor of Obstetrics at Johns Hopkins Medical School, said that it was resposible for more fetal death than dystochia, toxemia and prematurity combined and gave statistical evidence to prove this point.[1]

The literature of the past fifteen years has had scores of articles testifying to the influence of prenatal treatment in preventing congenital syphilis. I would like to report briefly one excellent recent article. This work by McKelvey and Turner,[4] was from the Johns Hopkins Medical School where, due to the influence of J. W. Williams, [1, 2, 3] so much research in prevention was carried on.

It included nearly one thousand cases and

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covered a period dating from 1914 to 1930. It was a very thorough piece of work and represented a co-operative project of the obstetrical department and the departments of pathology, syphilology, pediatrics and roentgenology.

The conclusions stressed the great value of treatment even late in pregnancy. If the mother is at term an injection or two of arsphenamine may materially improve the infant's chances of life. Treatment with arsphenamine in the last month of pregnancy altered the prognosis for the infant in a startling fashion. Of these 73% were normal. This is compared to 48.2% of normals in a group of untreated mothers, a difference of 25%. When it was possible to give 12 to 14 injections of arsphenamine, equal to at least 4 grams, congenital syphilis was not observed. If, however, it was possible to alternate courses of arsphenamine and one of the heavy metals, that is, mercury or preferably bismuth, even better results were obtained. This would require starting treatment by the fifth month of pregnancy. Of course, treatment through pregnancy was considered still better and in known syphilitic women treatment before pregnancy and throughout was advised if active syphilis or a positive Wassermann test was present.

Failures were due to insufficient treatment, lack of continuous treatment, or failure to take treatment during the last trimester of pregnancy. Inunctions of mercury are not as efficacious as arsphenamine and the administration of several doses of arsphenamine just before delivery is particularly important.

At the Children's Memorial Hospital we do not treat adults but we have had pregnant syphilitic mothers who have brought syphilitic children to the clinic in more than one hundred cases. We have been able to get these mothers to take treatment and have had normal babies in all but two cases. These women went only a few times for treatment, one of them five times at irregular intervals. In both of these failures the child's lues was so attenuated that it could not be detected by physical examination and the x-rays of the long bones were negative. A slightly positive serologic report in each case, however, made us feel that a very mild syphilitic infection was present.

Syphilis is uncommon in private practice. In the past fourteen years, however, I have had three cases of congenital syphilis in the babies of women who had been cared for by their physician during almost the entire period of pregnancy. The syphilitic infection of these mothers had not been suspected, although upon examination a few weeks after delivery each of the mothers had positive serologic tests. In another infant the presence of syphilis was learned by the physician who delivered the mother, through a positive cord blood test which is taken routinely in the hospital where the baby was born.

The value of treatment to prevent congenital syphilis is well established and the importance of its early administration is clear. In dealing with a disease as latent and illusive as syphilis it would seem that a routine serologic test for syphilis is indicated. There should be no objection to this on the part of the patient as it is done along with a searching history, and a careful physical examination, blood pressure determination and other tests. If explanation is required it need only be said that this is a part of the routine procedure of the first visit.

Optimism: Before the second decade of the present century the treatment for syphilis was much more limited and less effective than it is today and consequently the outlook was always doubtful. Even with the best treatment the specter of later tragedy haunted the scene. The patient of that day was treated with mercury, and iodides were used where indicated, until all clinical signs were gone. Then more mercury was given. Later from time to time still more treatment was given. Serologic tests and spinal fluid tests for syphilis as a means of checking results were then unknown. Lumbar puncture was perfected by Quincke in 1885 and was not commonly done until early in the present century.

Beginning with 1903, as remarked by Pusey[5] "one important discovery in syphilology followed another with a rapidity that is without parallel in any other disease. In 1903 Metchnikoff and Roux demonstrated that syphilis was inoculable in apes.

"In 1905 Schaudinn and Hoffmann ended the long search for the organism of syphilis by the discovery of the spirochæta pallida.

"In 1906-7 Wassermann, Neisser and Bruck applied the serum complement reaction of Bordet

and Gengou to the diagnosis of syphilis and developed as a practical test for syphilis what is now known as the Wassermann reaction.

"In 1911 Noguchi succeeded in cultivating in vitro the spirochæta pallida and completed proof of the specificity of this organism by reproducing the disease in animals from his culture.

"In the meanwhile there had been the development of arsenical chemotheraphy of syphilis begun by Uhlenhuth and carried forward so amazingly by Ehrlich with the introduction in 1909 and 1910 of salvarsan."

In 1921 Sazarac and Leviditi in Paris introduced bismuth therapy.

A few years later successful arsenical treatment by mouth administration was practiced using a drug best known in this country as stovarsol. It is called acetarsone in New and Non-Official Remedies. This drug has an important place in the treatment of infants and in children it may be used alone or in resistant cases to alternate with courses of bismuth injections. At the Children's Memorial Hospital we have used it in almost three hundred cases and we feel that it is a drug of the greatest value.

A new arsenical called Mapharsen has recently come into use which promises to displace all previous injected ones because of its lesser toxicity and greater efficiency.

With the development of this rich armamentarium of later drugs, probably all of them superior to mercury, and the ability to check their effect on the blood and spinal fluid, our views as to the outcome of treatment must be changed. The terrible specter of later doom, which the profession and the laity still too often associate with syphilitic infection, must be cast out. It is a tradition of a by-gone period.

It is the duty of the physician to imbue the patient with a feeling of optimism when educating him concerning his disease. Of course, one should not minimize the necessity for continuous, thorough and adequate modern treatment carried on over a sufficiently long period. There is no question among the best authorities today that patients adequately treated before serious degenerative changes have taken place are clinically cured in a very high percentage of cases; Stokes[6] says 80 to 85%.

Physicians Should Be Syphilis Minded: It is not at all uncommon to see patients who have been treated over months and even years without the physician knowing that he was dealing with syphilis. In one of our patients the little girl was treated by an oculist for eighteen months without his making a diagnosis of syphilis. She had an advanced interstitial keratitis with adhesions to the lens, and had had for many months a dirty yellowish membrane in the pharynx and nasopharynx. The left pillar and left tonsil, uvula, and part of the soft palate were destroyed. Following two injections of sulpharsphenamine the membrane entirely disappeared. A great many similar cases could be mentioned in all ages through infancy and childhood. The outlook on syphilis as expressed by one postgraduate who had practised many years is unfortunate. He said "this is a very interesting disease but we don't have any of it where I came from."

The failure to be wary of syphilis is not confined to any type of practitioner. Recently I learned of a patient who was being treated by a department head for deafness over a period of several months. This otologist wrote on the chart "Wassermann not necessary." He was quite chagrined when his patient in the eye department was found to have a positive Wassermann.

In another case a well known gastroenterologist had managed a patient with duodenal ulcer without result. The patient sought another gastroenterologist who had a serologic test made for syphilis which was positive. Upon treating the ulcer and the syphilitic infection the ulcer promptly healed.

Summary: I have attempted to stress three points which to me seem very important in our fight against syphilis today.

First: The efficacy of preventing congenital syphilis by treatment of the mother through pregnancy.

Second: The duty we owe to our patients to inform them of the nature of their malady and encourage them to expect a favorable result if they are co-operative and no serious degeneration is already present.

Third: The importance of knowing syphilis and being on the watch for it.

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DUODENITIS WITH ASSOCIATED ACRODYNIA

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Duodenitis was differentiated from duodenal ulcer by Judd[1] in 1921. It is characterized by hyperemia and stippling of the serosa, but the wall is not indurated, and on palpation the duodenum is undistinguishable from one that is normal. On examination of the mucosa diffuse or local inflammation and at times one or more simple erosions may be found. Kirklin[2] in 1929 reported forty five cases of duodenitis found at operation in which the diagnosis had not been made either clinically or roentgenologically. In 1934 he[3] proposed certain roentgenologic criteria essential for a diagnosis of duodenitis. First in importance was abnormally increased irritability of the duodenum, and, second, a mucosal pattern which was coarsely and irregularly reticular and appeared as clear islands lying in a denser network. The stomach was small and hypertonic with active peristalsis. Gillespie and Gianturco[4] in 1935 reported a case of duodenitis in a 13 year old girl. They were not impressed by any symptoms which might be characteristic of the duodenitis syndrome, and the symptoms generally were those leading to a clinical diagnosis of peptic ulcer. Pain and constipation were the cardinal complaints. They concluded the history is rarely typical and roentgen studies of the stomach and duodenum are justified in cases of obscure gastric discomfort.

Wellbrock[5] from histo-pathologic studies concluded there is a relationship between duodenitis and duodenal ulcer, and Konjetzny[6] thought duodenitis was an antecedent of duodenal ulcer. It is not impossible that the same factors concerned in the etiology of duodenal ulcer play a similar role in duodenitis.

Duodenitis associated with acrodynia, I believe, has never heretofore been described. The autopsy reports on patients with acrodynia have not mentioned a duodenal lesion. In the series of cases reported by Wood and Cole[7] little except bronchopneumonia was found and nothing characteristic of the disease was described. Thursfield and Patterson's[8] case showed only acute intussusception and Davis'[9] case fatty degeneration of the liver. Neither Warthin[10] nor Kernohan and Kennedy[11] mentioned lesions of the gastrointestinal tract in their necropsy reports on cases of acrodynia. The autopsy reports would, however, agree that there is a degenerative process affecting the central and peripheral nervous systems.

Figure 1 shows the spastic deformity and irregularity of the duodenal bulb.

Weston[12] applied the term acrodynia to a group of cases reviewed by Bilderback.[13] Swift[14] suggested the term "erythredema" for the diseases and Feer[15] decided from the clinical aspects that it was essentially a neurosis of the vegetative nervous system.

The reported cases have for the most part occurred in children from a few months to 7 years of age. Rodda[16] has analyzed and grouped the symptoms conveniently under 1. Those general in nature, as anorexia, loss of weight, weakness. 2. Those referable to the nervous system as hyperirritability, sleeplessness, paresthesia, anesthesia, loss of reflexes and photophobia. 3. Dermatologic symptoms as hyperhidrosis, milaria, desquamations, erythema, swelling, cyanosis, alopecia and ulceration of the gums.

The etiology of the disease is not known. Infections, food deficiency, arsenical intoxications

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and neurosis of the vegetative nervous system have been suggested as possible factors. The preponderance of opinion regarding etiology at present favors infection although the evidence brought forth is far from conclusive. The prognosis is usually good. Recovery may not be complete before several weeks or months, but the patients seldom succumb. If death does occur, evidence of intercurrent infection, chiefly bronchopneumonia, is usually found.

Reported in this paper is a case of duodenitis in a small child. The diagnosis of duodenitis was made by the criteria of Kirklin. There were several unusual features other than the duodenitis. The child gave a history of allergic manifestations following the ingestion of milk and this was well demonstrated during the treatment of the duodenal lesion. Also shortly after development of duodenitis symptoms the typical acrodynia occurred. There has apparently been a complete recovery from both conditions. No relapse of the acrodynia has occurred.

Case Report: G. Q., a 3½ year old female, was first seen September 23, 1935, because of "stomach" trouble.

The patient was the youngest of two children. The father had had gastrointestinal trouble for years, and the paternal grandmother had been told she had peptic ulcer. The only incidence of allergy in the family history was a paternal uncle who suffered recurrent attacks of urticaria.

The patient had been born at term; labor and delivery were normal and she weighed 8 pounds at birth. Development was normal and she had escaped all of the contagious diseases of childhood.

The parents had known this child was sensitive to milk and egg. She was breast fed two months and then put on a cow's milk formula. At the age of 10 months she was given whole milk at which time the sensitivity was first noted. A little milk or egg caused no difficulty but large amounts of either caused a profuse eruption on her scalp, face and body. When egg and milk were taken away the skin would immediately clear. This had been repeated many times at home.

Three weeks prior to her admission to the clinic she had first complained of abdominal pain about the navel. This was chiefly at night; it would awake her from sound sleep and make her cry three or four times each night. There was some discomfort during the day with no particular relation to meals. No vomiting or melena had occurred although belching was frequent. This abdominal distress was at times relieved by soda but food had never been given for the pain. Her bowels were constipated for the week prior to admission; before, they had always been regular. She had refused to stand up and walk for a week. Recently profuse sweating had been noted.

Her height was 37 inches (92.5 cm.) and her weight 29 pounds (13.1 kg.). Blood pressure was 120/80, pulse 108 and rectal temperature 99.2°. She was a slender, pale, well-developed child and was extremely irritable. At the first examination there were some small scattered papules on the trunk and face. The tonsils were medium size, cryptic and infected. The hands and feet were pink and cold. There was pronounced hypotonia. The physical examination was otherwise negative.

The urine was negative. On admission the hemoglobin was 90%, erythrocytes 4,880,000 and leukocytes 5,700, The differential count showed 40% lymphocytes, 3% monocytes, 54% neutrophiles, and 2% eosinophiles. The coagulation times was 3½ minutes, the bleeding time 3 minutes. The blood Kahn and Wassermann were negative and repeated examinations of the stool were negative for ova, parasites, and blood. Mantoux test with 1/10 mg. of old tuberculin was negative. Gastric analysis showed total acidity 29°, free HCl 14%. Fluoroscopic and x-ray studies of the stomach and duodenum showed duodenitis. X-ray of the chest was negative. Skin tests (scratch method) for milk, egg white, egg yolk and wheat flour were negative. Examination of the fundi by Dr. G. L. Porter was negative.

The girl was put on milk and cream every hour with doses of a preparation containing diastase, calcium carbonate, magnesium carbonate and bismuth subcarbonate every 2 hours. Within 36 hours she developed on her forehead, trunk and extremities a diffuse, red, macular eruption with considerable itchings. The parents said the eruption was identical to that which she had had previously from milk.

The hourly feedings of milk and cream were discontinued and she was given 3 bland meals daily and 3 in-between feedings of custard. The previously used alkaline medication was given after each of the six feedings and 2 teaspoons of mucin were given with each of the three regular meals. Doses of elixir phenobarbital with small doses of tincture of belladonna were given three times daily.

The gastrointestinal complaints were less marked within a few days and the child began to sleep better at night. Two or three days after the institution of treatment for the duodenitis there was more marked pink discoloration of the hands and feet, and they were puffy and sodden. The child perspired profusely, and there was marked anorexia and irritability. On October 9, 1935, her nose was pink, the hands and feet were pink and puffy, and the skin was desquamating in these areas, particularly the fingers and toes. There was excruciating pain in the hands and feet. She was extremely irritable and hypnotic. Insomnia and anorexia were marked. The blood pressure was 135/95. There was a maculopapular eruption on her chest, abdomen, back and buttocks, and she tore at her hands and feet and the lesions on her body. She was quite prostrated and slight photophobia was present. Ultra violet light, cod liver oil and yeast were started. Calomine lotion with tar was used on the hands and feet. By this time there was rarely a complaint of abdominal discomfort. On October 30, 1935, the parents reported she was "75%" improved. She was eating better, and the eruption was disappearing from her body. The profuse perspiration had ceased and there was no photophobia.

The hands and feet were still pink and desquamating and caused her considerable discomfort. The blood pressure that day was 135/80. On November 5, 1935, roentgenologic studies of the stomach and duodenum were negative. On November 16 the hands and feet were still pink and the feet still desquamating. She was feeling quite well and was bright, active and playful. On December 9 the blood pressure was 95/60. There was no discoloration of the hands and feet or hyperhidrosis. She was still sleeping and eating rather poorly. There had been no abdominal complaints for several weeks. Figure 1 shows the spastic deformity and irregularity of the duodenal bulb.

Comment. From the clinical history it was quite definitely established that the symptoms of duodenitis preceded the earliest signs of acrodynia several weeks. However, at the time the patient was first seen the pink hands and feet, hyperhidrosis, hypotonia, slight skin eruption and hypertension were noted. It would appear that in this case some of the factors concerned in the etiology of duodenitis might be the same as those in acrodynia. It seems not unlikely that etiological factors operating in peptic ulcer are the same as those in duodenitis. Many of the various theories of etiology of duodenal inflammation can be excluded in the case of this child. However, the reported patient was definitely sensitive to milk. Wellbrock[17] and Lipschutz[18] discussed the part allergic reactions may play in inflammations of the duodenum. Focal infection has been considered an etiological factor in both duodenal inflammatory lesions and acrodynia. Rodda advised tonsillectomy as an almost routine procedure in acrodynia. The patient in the reported case had chronically infected and enlarged tonsils. The duodenitis and acrodynia responded so well to medical treatment that tonsillectomy has not been done. There was not a history of food deficiency or insufficiency in the reported case. It is with hesitation that the possible interrelationship or common etiological factors of duodenitis and acrodynia in this case are postulated for the evidence is insufficient.

Duodenitis occurring in childhood is a rarely diagnosed condition, and the symptoms generally are those leading to a diagnosis of peptic ulcer. It is probable that inflammatory lesions of the duodenum occur more commonly in childhood than is generally supposed. The association of acrodynia with duodenitis is an unusual observation and offers opportunity for speculation concerning a common etiology in this particular case.

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PRIMARY CARCINOMA OF THE JEJUNUM

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A review of the available literature indicates that primary carcinoma of the jejunum is of such rare occurrence as to justify reporting our case. Rankin and Mayo report a group of fifty-five cases of small bowel carcinoma collected from a series of 8,932 cases of gastrointestinal tract carcinoma. Only twenty-one of the fifty-five cases reported occurred in the jejunum. Kordenat, Malerich, Bolloy, Rankin and some others have also reported individual cases.

Carcinoma of the jejunum may occur as a primary localized annular growth which produces a varying degree of obstruction at the site of the lesion or it may occur as a degenerative change at the site of a polyp. An analysis of the cases previously reported in the literature shows a wide variation in the age incidence, the youngest patient being thirty-seven years old and the

oldest seventy-five; the average age was about forty-eight years. The majority of the cases occurred in females, although in the Mayo statistics this did not hold true. The onset is usually gradual and the symptoms are essentially those of a chronic intestinal obstruction with vomiting, loss of weight, etc.

Rankin and Mayo state that the signs and symptoms vary in duration from two to three months to five years or more with the chief symptoms those of an intermittent intestinal obstruction, and secondary anemia. Increasingly obstinate constipation is the rule. Sometimes there are alternating periods of diarrhea. On inspection visible and reverse peristalsis, tenderness and rigidity, and a "palpable, tender mass that slips away from the fingers" are significant features. When the obstruction is quite marked, borborygmus is a very characteristic sign. Examination of the stool for blood is important but the presence of blood in the stools is not a constant finding. The radiographic examination is very important, first, as a means for ruling out other bowel pathology and, second, as a means of diagnosing the presence of an obstruction. The obstruction with the characteristic findings of a "mass which is movable and slips away from the fingers" at the site of obstruction is, in our opinion, the most significant finding and from these two findings a diagnosis of small bowel neoplasm may be suspected.

The case we wish to report occurred in a woman sixty-four years of age, white, and married. The essential complaints of the patient on admission were pain in the abdomen of five or six months' duration, vomiting of about the same duration, and constipation which had been present for years but which was becoming progressively worse.

The patient stated that for many years she had been suffering from constipation and that during the past few weeks especially this constipation had become very marked and was not relieved by any of the medicaments which the patient had used successfully in the past. At no time had there been any diarrhea and at no time had the patient noticed any blood in her stools nor have the stools been black at any time.

The pain in the abdomen had been getting progressively worse during the past five or six months and was located in the epigastrium, extending from right to left, and of a severe, cramp-like character. The pain was present all of the time and was not particularly related to the taking of food. It was definitely relieved by the passage of flatus, by a bowel movement or by vomiting. The patient stated that at the height of her pain she felt that there was a "stone" in her abdomen and that there was much "noise" associated with the pain.

Vomiting had been experienced during the past five or six months and at first occurred chiefly after eating, about once or twice a week. During the past few weeks the vomiting had become very much more frequent and more pronounced and for the last few days the patient had been vomiting almost everything she took by mouth, including even a drink of water. The vomitus was usually green and tasted bitter and sour. During the past week or two she had noted food particles, taken many hours before, returning in the vomitus.

There had been about a fifteen or twenty pound loss of weight during the past three or four weeks, and the patient also called attention to the presence of loud gurgling "noises" in the abdomen practically all of the time.

An inventory of the various systems brought out no particular points of importance. The patient stated she was moderately nervous and easily excited but her reflexes were all normal and there was nothing to indicate any central nervous system involvement. There was no precordial pain, no nose bleed, and no ankle edema. There was some tachycardia and palpitation on excitment and some dyspnea on exertion. There were no complaints referable to the respiratory system and the genitourinary system was apparently normal also. The patient weighed ninety pounds at the time of admission to the hospital.

Aside from childhood diseases the patient had always been in good health. She had had no surgical condition and had never suffered any accidents. She had been married for forty-six years; one child was living and well at the age of 31; husband living and well at 72. Menses were established at the age of sixteen, regular every four weeks, duration one week, no dysmenorrhea; climacteric at fifty-two with no bleeding since then.

The patient's mother died at age of thirty-

six in childbirth; her father at the age of sixty-six of pneumonia. One sister is living and well at seventy-two. There is no family history of carcinoma, tuberculosis, diabetes or other chronic disease.

Physical examination of this patient revealed a markedly emaciated elderly female about sixty years of age, lying quietly in bed. Regional examination showed no pathology of the head. The eye reflexes were all normal but the eyeballs were sunken markedly. There was no ear pathology; the nose appeared normal and the neck presented no palpable glands or other pathology. The mouth was quite normal also. Examination of the chest showed some evidence of a pulmonary emphysema with a hyperresonant note on percussion; no râles and no evidence of any lung disturbance of clinical importance. The heart was enlarged a little to the left, the heart sounds were distant; no murmurs were heard; rate was 84, rhythm regular; blood pressure 152/86. The abdomen was distended. Enormous peristaltic waves were visible. A loop of distended small bowel was visible through the abdominal wall and just to the left of the umbilicus a mass was palpable. This mass was not very tender and "seemed to slip away from the examining finger." The liver, kidneys and spleen were not palpable. There was no rectus rigidity. Rectal examination showed a normal sphincter tone, no palpable masses, and there was no blood on the examining finger. Examination of the extremities was negative and all of the reflexes were normal.

Examination of the blood showed a hemoglobin of 82%, erythrocytes 4,680,000 and leukocytes 9,600; coagulation time 1½ minutes. Three successive examinations of the stool for blood were negative.

The x-ray study of this patient was begun with a plain film of the abdomen. The typical striations of the valvulae conniventes and the characteristic gaseous distention of the proximal loop of jejunum were noted as indicative of a high small bowel obstruction. The site of the obstruction corresponded to a palpable, tender, somewhat movable mass which seemed to slip away from the examining fingers. At this point a diagnosis of a high jejunal obstruction due to a neoplastic mass was made. Our opinion at this stage of the examination was that this was a metastatic mass, and the patient was given some barium in an attempt to discover a primary neoplasm elsewhere in the gastrointestinal tract. There was no evidence of any pathology in the chest. The esophagus and stomach were normal, except that the dilatation of the jejunal loop already noted also involved the duodenum and stomach, and the patient presented a marked degree of cardio-esophageal relaxation with regurgitation and vomiting of some of the meal (Fig. 1). Examination of the bowel distal to the obstruction was also negative and no primary lesion could be found elsewhere.

Figure 1. Appearance of x-ray film after administration of barium solution. Note typical distention of proximal loop of small bowel, the valvulae conniventes, dilatation of the duodenum, and retention in the stomach. The site of the obstruction corresponded to the site of a palpable mass which was freely movable.

During the x-ray study, vigorous peristalsis could be noted through the abdominal wall and there was marked borborygmus. Films made at intervals were blurred because of this active peristalsis. With the data now at hand we felt that the palpable mass at the site of obstruction was probably a primary neoplasm and a preoperative diagnosis of a suspected primary carcinoma of the jejunum was made.

Exploratory laparotomy revealed the proximal loop of jejunum greatly distended and somewhat thick. The duodenum was also dilated greatly. In the left lower quadrant at the distal end of the obstructed loop of jejunum a hard, sharply limited, movable mass was found, annular in type and producing almost a complete obstruction. The inguinal lymph glands were apparently not involved and there were no visible metastases to the liver. The mass was resected and on gross section presented the typical appearance of a hard, annular, obstructive carcinoma (Fig. 2). Microscopic section showed the characteristic appearance of an adenocarcinoma (Fig. 3).

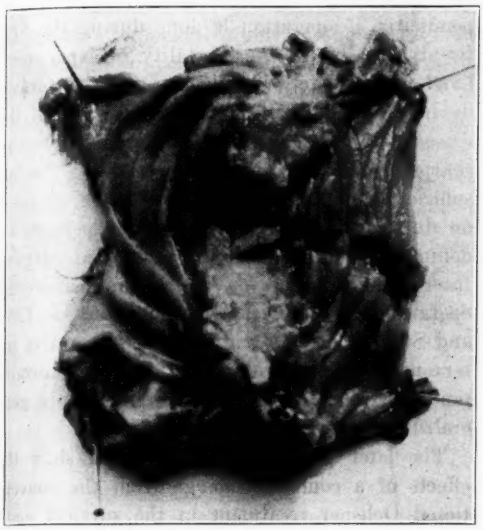

Figure 2. The tumor mass after resection showing the annular, obstructive nature of the mass, sharply delimited, with normal mucosa on either side of the neoplasm.

Figure 3. Microscopic appearance of the mass which was resected. The appearance is that of an adenocarcinoma.

Summary. A case of primary carcinoma of the proximal jejunum is reported in a woman sixty-four years of age. The clinical manifestations were those of a high small bowel obstruction, but the presence of a mass at the site of the obstruction, the characteristic "slipping" of this mass from the examining finger as described by Rankin and Mayo, and the x-ray findings led to a pre-operative diagnosis in this case. Resection of the mass and microscopical section confirmed the diagnosis.

A CRITICAL STUDY OF MORTALITY IN APPENDICITIS

A Review of Four Hundred Fifty-Six Cases

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The mortality of appendicitis still remains high, despite present advances in laboratory technique, accumulated experience and perfection of operative procedure. However, the mortality varies considerably depending chiefly on the stage of the disease in which operation is performed and on the mode of management. The purpose of this paper is to analyze the course of 456 cases, to elucidate the basic truth of the above statement, attention being directed particularly to the results of the Oschner treatment and of appendicostomy in patients with a ruptured appendix.

During the last two years, the patients having appendicitis admitted to St. Margaret's Hospital have been carefully studied. In many of these cases, besides the initial blood count, initial and subsequent daily Schilling hemograms have been made by the author. At times, espe-

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cially in those female patients in whom the diagnosis was in doubt, sedimentation tests were also performed.

The 456 patients studied constitute a series of consecutive cases in which appendectomy was performed by members of the staff of St. Margaret's Hospital from January 1, 1933, to February 28, 1935.

During this period, more than 500 appendectomies were performed on the surgical service. After a careful review of the individual charts, 46 interval cases, in which appendectomy was performed during the course of a pelvic operation, were eliminated.

The remaining 456 cases fall into five groups: 1. A group diagnosed as subacute appendicitis with confused clinical and laboratory findings, but definitely determined by gross and microscopical pathology. 2. A group diagnosed as gangrenous appendicitis (non-ruptured), including acute interstitial, ulcerative, and gangrenous appendicitis. 3. An abscess group in which the abscess was definitely localized and completely walled off from the peritoneal cavity by intestine or omentum. 4. A group having a local non-diffuse peritonitis. 5. Acute appendicitis with diffuse peritonitis.

Under classification the mortality is shown in the following:

TABLE 1. DATA FOR 1933

	Cases	Deaths	Mortality Per cent
Sub-acute appendicitis	52	0	0
Acute gangrenous appendicitis	128	3	2.34
Appendiceal abscess	4	0	0
Acute local peritonitis with rupture.	1	0	0
Acute diffuse peritonitis with rupture	21	5	23.72
Total	207	8	3.86

TABLE 2. DATA FOR 1934 AND PART OF 1935

Sub-acute appendicitis	63	1	1.42
Acute gangrenous appendicitis	136	0	0
Appendiceal abscess	8	0	0
Acute local peritonitis	9	1	11.10
Acute diffuse peritonitis with rupture	33	5	15.15
Total	249	7	2.81

As Tables 1 and 2 show, there was a definite decrease in mortality during the second half of the series. The reduction in mortality occurred in the gangrenous and diffuse peritonitis groups. The possible causative factors were: gradual improvement in operative technique and better pre- and postoperative preparation of the patient in diffuse peritonitis and individualization of cases.

Time factor. As Stanton[1], Love[2] and others have stated, there exists a definite relationship between the operative mortality of acute appendicitis and the duration of the acute inflammatory process prior to operation. In acute appendicitis, if operation is done during the first twenty-four hours, the mortality in experienced hands, is definitely lower than when performed during the first half of the second day of the disease. After this period the mortality rises sharply from the second to third day. The insufficient number of cases in this series operated on during the fourth and fifth day permits no definite statement as to the gravity of surgical intervention. However, fourth and fifth day operations are particularly dangerous as Love and Stanton stated. In such cases operative intervention on third, fourth or fifty day naturally tends to transform a local infection into a generalized peritonitis.

The later part of this report will show the effects of a complete change from the conventional Ochsner treatment in the surgical management of those cases in which there is general peritonitis exists with no attempt on the part of nature to localize the infection. The change referred to is the use of appendicostomy. Appendicostomy was tried by one member of this staff in every case in which a diffuse peritonitis complicated a ruptured appendix.

Mortality. The single death in the sub-acute group occurred on the seventh post-operative day and was due to pulmonary embolism. The corrected mortality was zero. There were three cases of pulmonary embolism during the period of two years and two months in the surgical service including this case. Two deaths in the acute gangrenous group were due to general peritonitis, and the other was caused by post-operative pneumonia. The mortality in this group was 1.13% for the two years.

Examination of Tables 1 and 2 show, in the second half of the present series, only one death in the local peritonitis group with a mortality of 11%. This case was operated on during the second day of illness and succumbed 24 hours later to streptococcus septicemia. In twelve cases appendiceal abscess, there were no deaths. The majority of the operations were performed on the third, fourth and fifth day. Only two cases were operated on the seventh and tenth days respectively. In seven cases the appendices were not removed and simple drainage was established.

There were 54 cases of acutely ruptured appendices with diffuse peritonitis. Among the thirteen operators one of them by routine employment of appendicostomy, brought the mortality rate down considerably lower than hitherto reported in the literature. In his series of 75 cases reported in 1934, the mortality was 1.4%.[3] In 1933, 1934 and the early part of 1935 sixteen cases of ruptured appendix were treated by appendicostomy and cecostomy by other members of the surgical department with a mortality of 12.5%; the remainder of the 54 cases were treated by the commonly employed method, namely, drainage with or without appendicostomy with a death rate of 21%.

In reviewing the mortality from appendicitis (all causes), Ryan[4] found the following: Suermondt 7.8%; Hoffman 6.8%; Marsch 4.5%; Colp 5.2% in 2,841 cases operated on at the Mt. Sinai Hospital, New York. In 1928, Eliason and Ferguson[5] reported 675 cases with a mortality of 5.3%. Arnheim and Neuhof reported 8.2% and 2.8% during the three year periods from 1928 to 1930 and from 1931 to 1933 respectively. Jordan[6] studied a series of 587 cases in 1932. Of this number, 39, or 5.11% ended fatally.

According to the figures in recent literature, the mortality in acute appendicitis complicated by diffuse peritonitis is according to Tasche and Spano,[7] 38%, and Anheim and Neuhof,[8] 16-21%; and Schaer, 56%, and Eliason and Ferguson,[5] 75%.

Post-operative adbominal distention in diffuse peritonitis. Abdominal distention in generalized peritonitis is too familiar to the abdominal surgeon to mention here, but the marked absence of distention in those cases which have been treated by cecostomy or appendicostomy deserves mention. In a series of 16 cases there were only two in which a slight amount of abdominal distention occurred (12.5%); while in cases treated by ordinary methods distention occurred in 27 out of 38 cases (70%). Less abdominal distention in those treated with appendicostomy or cecostomy, is the direct result of drainage of cecum and ascending colon and the contents of the small bowel through the drainage

TABLE 3. MORTALITY OF OPERATION ACCORDING TO PERIOD SINCE ONSET.

	I Acute Gangrenous.			II Local Peritonitis.			III Diffuse Peritonitis.			IV Abscess.			Total.		
Day	R.	D.	M. Per cent.	R.	D.	M. Per cent.	R.	D.	M. Per cent.	R.	D.	M. Per cent.	R.	D.	M. Per cent.
1	167.	0.	.00	1.	0.	.00	7.	1.	14.2				175.	1.	.46
2	74.	2.	2.6	8.	1.	12.50	24.	7.	29.1				106.	10.	9.40
3	18.	1.	5.3				8.	2.	25.0	1.	0.	0.	27.	3.	11.10
4	2.	0.	0.0				4.	0.	0.0	3.	0.	0.	9.	0.	0.00
5										3.	0.	0.	3.	0.	0.00
6										3.	0.	0.	3.	0.	0.00
7							1.	0.	0.0	1.	0.	0.	2.	0.	0.00
8															
9															
10										1.	0.	0.	1.	0.	0.00
Total	261.	3.	1.42	9.	1.	11.0	44.	10.	18.7	12.	0.	0.	326.	14.	4.11

R.=Recovered. D.=Died. M.=Mortality.

TABLE 4. CASES DIED IN RUPTURED APPENDIX WITH DIFFUSE PERITONITIS.

No.	Sex	Age	Types of operation.	Period since onset.	Time elapsed after operation.	General condition before operation.
45	m	66	Appendicostomy.	46 hours	10 days	Poor.
46	m	60	Appendix not removed. Drained.	40 hours	2 days	Very poor.
47	m	53	Appendectomy with drainage.	21 hours	4 days	Fair.
48	m	66	Appendectomy with drainage.	42 hours	5 days	Poor.
49	m	3	Appendectomy with drainage.	52 hours	2 days	Very poor.
50	f	35	Appendectomy with drainage.	50 hours	2 days	Very poor.
51	m	44	Appendicostomy.	48 hours	3 days	Fair.
52	m	49	Appendectomy with drainage.	44 hours	2 days	Fair.
53	m	61	Appendectomy with drainage.	48 hours	27 hours	Pt. had signs and symptoms of intestinal obstruction. Very poor condition.
54	f	7	Appendectomy with drainage.	48 hours	2 days	Extremely poor condition.

m=male. f=female.

tube. As Quain and Waldschmidt,[9] Gatch,[10] Jones[3] and others have shown the best treatment for distended bowel or advanced ileus is to relieve tension and thereby early secure a normal blood flow to the intestinal wall actually enhancing the protective measures instituted by nature.

Table 5 shows the complete list of the cases who recovered from diffuse peritonitis after operative treatment.

Analysis of Table 5. There were ten deaths in 54 cases of acutely ruptured appendix with diffuse peritonitis. The age incidence in general was in the two extremes of life. Four cases were over 60, one case three, and another seven. Eight of the fatal cases were operated on within 48 hours after onset. The general condition of the patients before operation was very poor.

Case 53 entered the hospital with marked signs and symptoms of acute intestinal obstruction. The general condition was extremely poor. Due to the poor pre-operative condition, the surgeon had to wait several hours before he made a simple incision and drainage. The condition of the patient did not justify further operative procedures. The patient died 27 hours after operation. I included this case in the table for sake of completeness of the statistics. The mere incision and drainage of peritoneum, did not influence the clinical course.

Case 54 entered the hospital with a temperature of 104.4 degrees F., pulse 180 and respiration 32. The initial blood picture was a total white count 17,700 with polymorphonuclear leukocytes 95%. The appendix was ruptured and smear showed streptococci. The patient died within forty-eight hours after operation.

TABLE 5

Comparison of mortality and length of stay in hospital between appendicostomy and other surgical procedures in ruptured appendix with diffuse peritonitis.

	Appendicostomy (Cecostomy included.)	Other types of operation.
Cases	16	38
Recovered	14	30
Deaths	2	8
Average No. of days in hospital	23.70	24
Mortality per cent	12.50	21

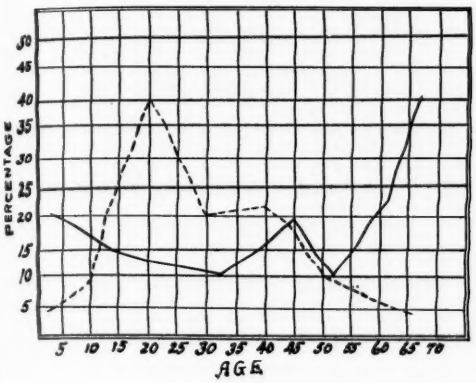
"Other surgical procedures" mean that patients with generalized peritonitis were treated by merely opening the abdomen and inserting drains or removing the appendix and establishing drainage.

Diagnosis. In regard to diagnosis the author desires only to mention his experience with Schilling count and sedimentation tests. Cattanewo,[11] Grodinsdy[6] and Lesser and Goldberger[11] have reported that the sedimentation rate in cases of acute appendicitis per se is uniformly normal while in all other abdominal conditions simulating the acute abdomen it is abnormal. By determining the sedimentation rate, the author believes that numerous unnecessary laparatomies have been avoided. I found it an extremely valuable adjunct to the blood picture and clinical findings. The same was found to be true of the value of the Schilling differential count in arriving at a diagnosis.

I agree with Sours,[12] Yaguda[13] and others that a Schilling's differential count is of definite value in the diagnosis of acute appendicitis. Operability of the patient and the extent of the lesion can be determined much more accurately than with the simple white and differential count. However, the value of Schilling hemogram has not been fully appreciated by many surgeons. The statements which has recently been made by clinical pathologists, on the striking lack of understanding of the physiology and pathology of the blood by clinicians, should arouse our interest. Eisenberg[14] aptly said "there will always be a group of clinicians who will refuse to accept newer facts discovered by modern hematology, and who will continue missing, now and then, an occasional diagnosis, taking out an inoffensive anemic appendix which had never done anyone any harm, or leaving in the so-called silent suppurative appendices, or making sanguine prognoses only to find themselves confronted with the sudden death of that particular patient who 'had been doing so well right along.'"

Pre-operative treatment. Most of the acute appendicitis cases entering the hospital within 40 hours with no signs or symptoms of general or local peritonitis, were operated on immediately after admission under routine pre-operative sedation (Morphine Gm. 0.15 with atropine Gm. 0.0004 for adult). They were ideal cases and gave an almost negligible mortality, but the cases which came in after 40 hours with local or diffuse peritoneal irritation called for different management. Cases with local peritonitis progressing to abscess formation required absolute rest in bed with nothing by mouth, and fluids intravenously. If pulse, temperature and blood picture indicated improvement, operation was then considered.

In the presence of ruptured appendix and diffuse peritonitis, patients were prepared by sedatives and fluids intravenously (5 to 10% glucose



.....Cases recovered.
.....Percentage of death.

Fig. 1. The influence of age in recovery and mortality rate in ruptured appendix with diffuse peritonitis.

solution), and subcutaneously 2½% glucose in sodium chloride solution). Under this management surgical intervention can be considered. With more careful consideration of the patient's condition before operation, some of the *cases which have been listed on the mortality* chart might not have been there. A few of the cases in the ruptured appendix with diffuse peritonitis group might have been given a greater chance for recovery, if they had been given preoperative treatment in an endeavor to improve their general condition.

Anesthesia. In almost one-half of the cases with no signs of generalized peritonitis, and with the patients in good condition, ether was administered. The other half were given ethylene. More than 85% of cases with generalized peritonitis and in poor condition were operated upon under ethylene anesthesia. A negligible number of cases were operated under local or spinal anesthesia.

Operative technique. In cases with appendiceal abscess, the appendix was usually not removed. The abscess cavity was drained. A ruptured appendix with diffuse peritonitis called for individualization of each case, technical skill and good surgical judgment. Two operative procedures were employed as shown in Tables 4 and 5. About two-thirds of the cases were treated according to a conventional method, that is removal of the appendix with drainage. In this group to relieve post-operative distention a hot boric compressor heat cradle was applied to the entire abdomen. This method gave a mortality of only 18% in the hands of one of our surgeons, an operator however of experience and skill in abdominal surgery. The second method was appendicostomy[3]. The appendix was identified and removed. A No. 16 catheter or rubber tube was inserted through *the omentum and then into the colon through* the appendiceal stump. A plain catgut suture was then placed through the appendiceal stump and rubber tube, and tied. A purse-string suture of catgut or silk was then passed around the appendiceal base. The stump with the tube was inverted into the cecum and the purse string tied. *The tube is then brought to the outside* through a stab wound or through the original incision. The primary wound is closed with or without drainage. However, a rubber drain was usually inserted into the pelvis and another up *towards the region of the hepatic flexure of the* colon. In difficult cases of retrocecal appendix a simple ligation of the base of the appendix and removal of the infected portion without invagination saves time and produces less trauma. Appendicostomy is sometimes difficult and cecostomy accomplishes the same results and has the *advantages of simplicity and speed.*

Post-operative treatment. Immediately after the operation the patient receives 1000 c.c. of 5 to 10% glucose solution intravenously or the same amount of normal salt solution subcutaneously. *This may be repeated every six to eight* hours as needed. In addition in diffuse peritonitis with appendicostomy as much as three or four thousand c.c. of normal salt solution was introduced through the tube into the colon *in 24 hours.*

Summary

1. Four hundred and fifty-six cases of appendicitis were admitted to St. Margaret's Hospital during a period of 26 months from January 1, 1933, to February 28, 1935. Careful study of these cases shows that the mortality rate for 1933 was 3.86%, and for 1934 and for the first two months of 1935 was 2.41%.

2. The possible causative factor of the lowered mortality rate during the second half of the period is discussed.

3. Thirty-eight cases of ruptured appendix

with diffuse peritonitis were operated on by conventional methods with a total mortality of 21%, while 16 similar cases treated with appendicostomy or cecostomy gave a mortality rate of 12.5%.

4. Cases treated with appendicostomy or cecostomy suffered little or no post-operative distention.

5. Analysis of the fatal cases of ruptured appendix with generalized peritonitis showed that most of the patients operated on were in poor condition before surgical intervention. There was a definite relationship between age of the patient and mortality rate.

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DIFFERENTIAL DIAGNOSIS OF DISEASES CAUSING HEMATURIA

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Hematuria presents a problem in urological diagnosis of utmost interest to the physician and the determination of its origin while occasionally is a simple procedure may at times baffle the ingenuity of the most expert urologist. In discussing the problems involved it is hoped that the seriousness of bloody urine will be brought to the attention of the general practitioner, who in most instances is the first to be consulted by the alarmed patient. When it is thoroughly realized that hematuria may be the "first, the last and almost the only symptom" of bladder malignancy, and in 54% of adult renal neoplasms the initial symptom, it is obvious that no one is justified in passing lightly over this important finding. Unfortunately we still see patients who have had their bleeding treated with medicines and the symptoms minimized at the sacrifice of most valuable time. Therefore, I would like to emphasize that these patients be immediately and thoroughly studied preferably at the time the bleeding is present—this study to include all available means at our command, in particular the cystoscopic examination. This applies in most instances of unexplained microscopic red blood cells as well as gross bleeding.

For the purpose of the discussion, hematuria may be divided into two great groups: 1. Essential or idiopathic hematuria, and 2. Hematuria due to demonstrable lesion in the urological

tract leaving out the hematurias that occur in strictly medical conditions such as leukemia, purpura, hemophilia, congestion of the kidney in cardiac failure, renal embolism in endocarditis and the various chronic renal inflammatory lesions associated with cardiovascular disease. Likewise such hematurias that arise from injuries of the kidney, bladder and urethra, acute gonorrheal infection, the passage of sounds, etc., will not be considered since the cause is obvious. In connection with the traumas it is well to mention the bleeding following violent exercise. It is not uncommon to see hematuria in athletes after exercise and an individual receiving a severe blow on the back may show bloody urine. Since hexamethylenamin is so commonly used it must be remembered that it may be responsible for painful urination associated with blood.

The three glass test affords a simple means of giving a clue to the site of bleeding. The patient is told to void equal amounts in three glasses. Blood in the first glass and appearing at the meatus means bleeding in the anterior urethra or between the meatus and triangular ligament. If in all the glasses its origin is likely to be either primarily or secondarily from the bladder, i. e., either the bladder or kidney. When in the third glass only it is considered to be from the posterior urethra.

Essential Hematuria. If a patient presents himself with gross blood in the urine, with or without pain and if repeated cystoscopic and x-ray examinations fail to account for the origin of the blood, it is said to be essential or idiopathic hematuria. This condition always has and still does constitute one of the difficult problems of diagnosis. Many writers believe this term is an admission of ignorance as to the true cause of bleeding. Nevertheless in spite of modern methods there still remain cases of unexplained renal bleeding in which the diagnosis seems not only justified but positively indicated.

For example: A case in point of a girl age 14 seen in 1925 with a history of hematuria extending over a period of 6 years, and with a family history of hematuria in the father's youth and also in one brother, was carefully studied over a period of time. The bleeding was frequently observed to come from the right ureter and never from the left. The pyelogram showed an irregularity of the upper calyx which suggested papilloma. There was no infection in either kidney. The present attack was of 4 weeks duration and the loss of blood became alarming. After consultation with a competent urologist a nephrectomy was agreed upon in order not to overlook an early tumor which the pyelogram suggested. The kidney was studied in a competent laboratory, many microscopic sections were made and with the exception of a slight round cell infiltration about the papillae without ulceration, no pathology of any kind was discovered to account for the bleeding. Within 4 months the bleeding appeared from the remaining kidney. I quote this experience as a case of essential hematuria and because of the unusual feature of familial hematuria. This I believe is rare.

Rose[1] believes that certain types of renal pelves designated as "dysuric" may account for this type of bleeding. In this type of pelvis the calices are long and narrow and extend deeply into the parenchyma of the kidney so that any slight obstruction to the free drainage of urine may produce localized back pressure resulting in the rupture of small vessels. In 1924 Lower[2] observed also that essential hematuria is apt to appear in the complex pelves. those with long calices and many minor calices.

Many kidney pelves have small, very thin-walled vessels near the surface of the mucous membrane which may easily open and produce copious bleeding. This variety of bleeding is analogous to the ordinary nose bleed. Overcrowding the kidney with large fluid intake may break one of these exposed vessels. Nephroptotic kidneys when associated with bizarre pelves, aberrant vessels or extra ureteral scar tissue bands have a tendency to bleed easily.

Wilbur and Priestly[3] and others call attention to the importance of focal infection as a cause of essential hematuria. The exact manner in which foci of infection may produce bleeding is not understood but they found in 100 cases 78% in which there was definite evidence of dental or tonsillar infection. Eradication of the infection had a very marked tendency to prevent recurrence of the bleeding.

For many years it has been taught that after complete study has shown no abnormality in the urinary tract to account for bleeding a checkup examination should be done in six months or a year before a final diagnosis of idiopathic hematuria is made. This still holds as good practice. It is possible that an early neoplasm present at the first examination remained undetected because of its small size and if present it should have increased in size sufficient for its discovery in the next examination.

Bladder Bleeding. A very large group of hematurias result from new growths in the bladder. Kretschmer[4] in a review of 300 cases of

carcinoma of the bladder found a history of bloody urine noted in 277 cases or 92.33% and he believes that the remaining 7.67% passed blood at some time or other but failed to note it. Bladder bleeding is quite often painless, intermittent, well mixed with urine and frequently large or small clots may be passed. Terminal bleeding ordinarily may be expected to indicate a lesion near the internal urethral orifice and caused by the contractures of the bladder in evacuating the last few drops of urine.

In contemplation of the above mentioned figures it behooves us then to urge cystoscopy by the aid of which immediate diagnosis may be made. It is apparent that the bleeding resulting from the benign lesions of the bladder such as ulcer, stone, the various types of cystitis and so-called benign papillomas can only be successfully diagnosed by the same means.

Kidney and Ureter Neoplasms. Bleeding is most frequent in the serious lesions of the kidney demanding early recognition and treatment, in particular tumors and tuberculosis. Here again bleeding is usually intermittent, ordinarily well mixed with urine, and may be associated with renal colic or be painless. Old brown blood evenly mixed with urine is almost always from the kidney. In the rather common renal tumors designated as hypernephromata Burford[5] finds that hematuria is almost universally the first indication and is of the interval type—the interval of bleeding may be months or even years. It is unfortunate, however, that many malignant tumors do not bleed until they are so large that they are easily palpable in the loin and are probably beyond control. One interesting type of renal lesion causing hematuria is the rather rare papilloma of the kidney pelvis, the only symptom of which may be a persistent hematuria. The lesion does not as a rule infiltrate the kidney parenchyma but tends to grow down the ureter; they seem to resemble the bladder papillomas and may suddenly change over into the malignant type and metastasize.[6] In contrast to the presence of hematuria in the adult kidney tumor it should be noted that this danger signal is almost never seen in the infantile and juvenile kidney growths.[7]

In the diagnosis of renal hematuria the pyelogram is almost essential. The retrograde method is the most valuable since it is quite possible that occasionally no shadow will be obtained with the intravenous method, if the affected kidney does not have sufficient function to excrete the dye.

Tuberculosis of the kidney is one of the most important causes of renal hematuria being next to frequency of urination as the most common initial symptom of that disease.[8] A few remarks on the diagnosis of tuberculosis of the kidney seem to be in order because of its importance. Its recognition depends primarily on the identification of the tubercle bacilli in the bladder or kidney urine or in both, the appearance of the bladder and on plain x-ray films of the G. U. tract showing calcareous deposits in the region occupied by the kidney. Pyelograms here should be made with caution and only when absolutely necessary since it may result in generalization of the infection. The tubercle bacilli are best found by centrifugation of the urine at high speed for 15 to 20 minutes, obtaining the sediment with a capillary tube and making a thick smear to be stained in the usual manner.

Hematuria from bladder or renal calculus. All cases of the unexplained presence of microscopic red blood cells in the urine should make one suspicious of calculus. The passage of a very small sharp stone down the ureter results in colic associated with blood in the urine, the gross urine appearing clear but on microscopic examination red blood cells are found. Vesicle calculi by erosion of the mucous membrane results also in the finding of blood.

Blood in varying amounts is a common finding in the pyogenic inflammatory lesions of the kidney such as pyelonephritis and results from the fracture of the young blood vessels of the granulation tissue. Ordinarily blood is not an early finding but appears late in the disease.

Bleeding from prostatic lesions and from varicose veins around the neck of the bladder resembles bleeding from the posterior urethra. It has a tendency to be very profuse and large clots may form in the bladder. The passage of catheters or sounds in prostatics may result in alarming bleeding requiring radical measures. In these cases blood transfusion is a valuable help.

Hemoglobinuria must be mentioned in connection with this general topic. It results from the transudation of dissolved hemoglobin from within the blood vessels into the urine. It occurs in various toxic conditions resulting from chemical poisoning, in the "black water fever" of

malaria, is occasionally observed after blood transfusions and after large burns. It is recognized by its characteristic red color, the urine being clear or if cloudy on allowing the specimen to stand the supernatant fluid retains the red color. The Benzidin or Guaiac tests give a positive reaction. Red blood cells as a rule are not found on microscopic examination.

Summary. In conclusion it is hoped that the importance of bloody urine as a danger signal of grave pathology has been brought to the attention of the general practitioner. Modern methods of diagnosis including cystoscopy should be instituted at once, preferably at the time the bleeding is in progress so that in renal bleeding one may have the advantage of observing from which ureter the blood is coming. A satisfactory diagnosis may not be possible at one sitting so that it often becomes necessary to study these patients over a long period of time.

The causes of hematuria most likely to be encountered have been discussed.

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MONGOLISM IN ONE OF DIZYGOTIC TWINS

Report of a Case

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A fourteen-month-old girl afflicted with mongolism was brought to the Institute for Juvenile Research for examination previous to commitment. The patient was one of twins. The other twin was a normal boy.

The patient presented the typical appearance and most of the typical signs of mongolism. The face was broad and flat. The eyes were small, oval, slanting. The inner canthi were not quite covered by vertical folds of skin, which, had they been more pronounced, would have produced epicanthus. The head was large,* broad, flat at the occiput. The fontanelles were widely open, particularly the anterior fontanelle. Macewen's sign was positive. The fontanelles were not bulging, nor were the superficial vessels of the scalp engorged. The external ears were small, dish-like, turned forward. The lips were cracked. The tongue was not fissured. No teeth had erupted.

The hands were short, stubby, the palm pattern simplified toward the simian pattern. The chest form tended toward pigeon-breast, and the sternum was protruded as the ribs sank and straightened with each inspiration. There was no cardiac murmur.

Fig. 1. Left to right: normal twin, normal sister, mongol twin.

The patient was pot-bellied but there was no umbilical hernia. Compared with her brother, her legs were short in relation to the trunk. Her feet appeared normal. The big toe was not widely set and there was no plantar crease. There was a general muscular hypotonia and a harsh dry skin.

There was a history of rapid increase in the size of the head during the first three months of life.

The twin brother was a well-nourished, sturdy, healthy, normal boy. He had seven teeth. The anterior fontanelle was small but open, Macewen's sign was absent.

There was no history of mongolism or other

Studies from the Institute for Juvenile Research, Chicago, Series C, No. 270.

*The head size is atypical.

feeble-mindedness in the family. The parents were intelligent, cultivated people. They had one other child, a normal girl three years of age. The mother was 26 and the father 28 at the birth of the twins. The mother was in good health at the time of conception but was not well during pregnancy. She suffered a fall during this period. There was no history of twinning in the family.

It seems likely that this child in addition to mongolism had a transient hydrocephalus after birth.

Discussion. Since the twins are of opposite sex they obviously are of dizygotic origin. Other instances of the occurrence of mongolism in one of dizygotic twins have been reported and summarized.[1,2] Their significance lies in the fact that the concomitant development of a normal fetus and a mongol fetus in the same uterus demonstrates that no etiological hypothesis placing entire dependence upon a humoral mechanism of the maternal blood is tenable. Such hypothesis would be irreconcilable with such cases as these. The ready transmission of at least most endocrin hormones across the placental barrier makes it furthermore highly unlikely that the mechanism of the production of mongolism is humoral at all.

When mongolism occurs in identical twins both twins are affected.

These facts may be reconciled with the hypothesis of the author,[1] that mongolism is due to the fertilization of an ovum the viability of which has been diminished by its age or with the hypothesis of Rosenau[2] that mongolism is due to foci of tissue change in the ovary, perhaps scars marking the sites of old ovulations.

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CLASSIFIED MEDICAL ECONOMICS

"Most of the problems of Medical Economics center around the existence of a large low-income class. But these are economics rather than medical problems and their solution should not be sought through the reorganization of approved forms of medical practice while the industrial and economic conditions responsible for the insufficient income are entirely ignored."—R. T. Elmer, Medical Record.

LIFE, DEATH AND DEXTROSE

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There are fashions in medicine, as there are fashions in women's hats. Fifty years ago, so I am told, most patients were starved and thirsty; now, they are dextrosed and drowned.

Time will eventually determine the real value of glucose and fluids given parenterally, but already criticism is beginning to arise of the too free use of such medication[1], deaths are being reported [1, 2, 3], this paper and others. Rumold, working in Orr's laboratory[1], gave continuous venoclysis of saline and dextrose to experimental animals, found "pulmonary involvement in every instance," usually pulmonary emboli. Titus[4, 5], again warned of over-stimulation of the pancreas with consequent increase in endogenous insulin and possible hypoglycemic shock. Reactions from intravenous infusions have been widely written up[2, 6, 7, 8, 9, 10].

A criticism not widely enough mentioned, is that of inflexibility of administration. A "standard" 5, 10 or 25%[30] means that the treatment is not individualized to the patient and his illness. In marked dehydration, a very weak solution should be given in large amounts, or the glucose may be given intravenously and fluids subcutaneously. If additional glucose is needed, especially in the presence of edema, it may be administered in 25 or 50% solution.

Dextrose (d-glucose), a hexose monosaccharide, is found in the blood of all animals *in small quantities* (usually about 0.1%), and in larger amounts in fruits and plant juices[34] usually associated in the latter with fructose and sucrose (cane sugar).

Its practical importance can be judged from the fact that over one-half of the body's energy is estimated to be derived from glucose[11]. It is the end product of carbohydrate metabolism, i.e., the form into which all carbohydrates (and up to 58% of proteins and 10% of fats) are converted before they are available for oxidation.[35] In the healthy body, dextrose is constantly being burned and replaced.

Despite the intermittent intake of nutrition, the blood sugar is kept at an average level of 100 mgm, with variations between 80 and 120 being considered in the normal range. The compen-

sating mechanisms to stabilize the blood sugar include: (a) the liver, which withdraws excess sugar when the blood sugar is elevated (blood in the portal vein may contain almost 200 mgm), converts it into glycogen and stores it. Glycogen is also stored, to a much less extent, in muscles and other organs. When the blood sugar drops below normal, the glycogen is reconverted into dextrose and released into the blood stream. (b) the kidneys: When blood sugar rises above 170 mgm. in a normal individual, glycosuria begins. This is not true in the rare cases of "renal glycosuria," in which the kidney threshold is lower and sugar spills over into the urine with a much lower blood sugar. (c) pancreas: insulin production is increased as blood sugar increases.

In practical application, all these points must be kept in mind, with reservations that an ill patient will not present such a smoothly working machinery and that dextrose is given by routes not natural to the body and in very high concentrations. (The weakest solution of dextrose given clinically is 5%, approximately 50 times its concentration in the blood stream.)

Glucose must be given slowly to avoid hyperinsulinism and to prevent loss through glycosuria. If infused rapidly, a quantitative urinary sugar should be run, so that the net amount retained by the organism can be determined. Graphs of blood sugar during dextrose injections show a beginning fall after 75 gm. have been given[5]. This is interpreted to be due to overstimulation of insulin formation.

A frequent renewal of the dextrose reserves of the body is necessary, because the stored glycogen of the liver is largely depleted after missing several meals[11]. Research is in progress on the question of dextrose utilization in disease. Koster and his coworkers[33] have found that postoperatively the respiratory quotient does not usually rise above 0.76 during the first week, apparently indicating that glucose is not oxidized during that time. Preoperatively, these same cases showed a marked rise toward 1.0, after intravenous glucose.

$$\text{Respiratory quotient} = \frac{\text{volume of carbon dioxide produced}}{\text{volume of oxygen consumed}}$$

When carbohydrates are being utilized, the quotient is 1.0, with fats 0.7 and with proteins between the two, often around 0.82. "The absorption of an abundance of carbohydrate does not greatly change the amount of combustion taking place. It may result in the use of carbohydrate as a fuel almost to the exclusion of fat for time being."[31]

If the apparent significance of these findings can be corroborated, it will mean that the amazing results post-operatively of intravenous infusions recorded by some authors, Hyman[2] for example, are due solely to the fluid or medication given. The work of Johnston is enlightening in this regard. He has apparently demonstrated that there is no oxidation of dextrose injected into persons in a state of complete starvation, since the sugar was stored, or in those in a submaintenance or partially depleted state, since storage took place over oxidation for the purpose of accumulating glycogen, and oxidation did not occur until the stores were filled. He gives an excellent bibliography with his article on the relation of salt and water to the oxidation of dextrose,[12] collected, for the most part, from research biological publications rarely available to the clinician. The findings in this field may be of immense value later, but at the present time, they seem almost contradictory and impossible of practical application.

Death following glucose. Male, aged 54 years, chronic hypertensive for many years; huge, hypertrophied heart, easily palpable radial arteries, sclerotic retinal vessels; presented dyspnea, orthopnea and edema of legs. He was irrational and had been suffering from mental deterioration for several years (no history, physical or serological findings of lues), apparently as a result of encephalomalacia secondary to arteriosclerosis. He refused to take nourishment, except fluids by mouth, so was given 50cc. of 50% dextrose [25 gm.] glucose direct from commercially prepared ampoules[13] at intervals of 12 hours, with no increase of temperature or local phlebitis. The third dose, given in approximately fifteen minutes, was followed within three minutes by tremors and jerking motions of right arm and leg. A generalized convulsion took place and exitus, despite the usual treatment. Necropsy refused. Here, apparently, a cerebral embolus was the causative factor; its source either the dilated auricle or the sclerotic cerebral vessels.

Glucose in shock. A woman of 31, following a normal pregnancy, her second, was in labor thirty hours, pains being irregular both as to force and regularity. Forceps applied because second stage was delayed over two hours, and fetal tones accelerated. The bleeding was slight, uterus firm and of normal size. About fifteen minutes later, she complained of feeling weak. Pallor appeared, blood pressure dropped to 80/60 (normal 115/74), and pulse rapidly became imperceptible. In addition to external heat, Trendelenberg position, she was given 50 cc. of 50% warmed glucose solution over a period of ten minutes. Before the injection had been completed, the pulse became

perceptible, color improved and patient became fully conscious. She remained in good condition subsequently, with no further treatment.

Glucose in lowering acute hypertension. This is only one case, and there is no attempt to state that glucose will always lower suddenly raised blood pressure or that it will avert an impending cerebral hemorrhage. As it was the only medication used, the effect might be ascribed to its use. Woman of 68, chronic hypertensive with usual pressure around 170/100, was seen in distant home, complaining of gradual onset of severe, generalized headache associated with repeated vomiting of bile-stained material (6 times) and numbness of left leg and arm. Never before or since, has she had these symptoms; ophthalmoscopic examinations have been repeatedly negative for choked disc or other retinal changes; (except some sclerosis of vessels); there was no fever, no abdominal pain or tenderness, no unusual food ingestion or history of allergy. Blood pressure was 220/115; heart was negative, except for moderate enlargement of left ventricle. Autolavage of alkali powder and 20 cc. of 50% glucose given slowly. Headache gone in ½ hour; pressure down to 180/110. No sedative or narcotic given; no venesection.

Indications for dextrose (and fluid) therapy

I. Hyponutrition:
- a. Due to inability to take in, retain and utilize sufficient nourishment.
  1. Vomiting and/or diarrhea
     - (a) Gastrointestinal tract: gastroenteritis (esp. of children), colitis, dysentery, obstruction; preoperatively, during or postoperatively[9,14,15] exogenous poisoning.
     - (b) Peritonitis, appendiceal abscess.
     - (c) Hyperemesis gravidarum
     - (d) Pre- and postoperative; during operation if spinal anesthesia is used[16], or if shock and hypotension appear. Postoperative complications, such as gastric dilatation, ileus, vomiting and anuria[2]
  2. Fistulae, intestinal or biliary.
  3. Unconsciousness or coma:
     - (a) Cranial trauma; also valuable because will decrease intracranial tension
  4. Dieting, starvation, prolonged anorexia; during and after heavy work (fluids and minerals also needed, especially if sweating marked).
  5. Heart:
     - (a) Coronary thrombosis[17].
     - (b) Acute myocarditis, especially in infectious diseases.
- b. Due to increased oxidation:
  1. Increased rate of metabolism, notably hyperthyroidism.[21] Glucose indicated not only because of increased metabolism, but to protect liver. Mora[18] has called our attention to hepatic pathology, functional in that the glycogen reserve is diminished, organic in that there is a lesion (simply termed "chronic patchy parenchymatous interlobular hepatitis"). Arnold Jackson, in discussion, suggested that the functional disturbance may be due to increased need of body for glucose.
  2. Acute infectious diseases and prolonged fevers, pneumonia, sepsis. Also valuable here for effect on heart.
  3. Malignancy and tuberculosis. Glucose should spare fat.

II. Disturbances of water balance.
- A. Edema:
  1. Edema of cardiac origin.
  2. Increased intracranial pressure following trauma, "wet-brain" of lead poisoning and delirium tremens; possibly, uremia and convulsions. Also, to lessen pressure of brain tumors preoperatively, and those inoperable.
  3. Glaucoma and increased intra-ocular pressure postoperatively. (speculative value).
- B. Dehydration:
  1. As listed above under hyponutrition, and below under metabolic dysfunction except that either fluids are administered separately or a weak dextrose and saline solution given intravenously.
- C. Hemorrhage, until transfusion can be prepared, donor and recipient typed, or where transfusion impossible. We give dextrose solution to the donor, as the latter has undergone a hemorrhage, controlled though it be.
- D. Shock:
  - (a) Traumatic, including operative.
  - (b) Burns

III. Metabolic dysfunction:
- a. Acidosis[2,19,20], especially ketogenic acidosis (with insulin) and "acidosis" of children, cyclic vomiting.
- b. Liver: decreased function by its disease, biliary disease, hyperthyroidism, etc.[22]
- c. Hypoglycemia: Should be used only in acute emergency, because glucose will stimulate increased insulin formation (see current references for high fat diet, John's insulin treatment for spontaneous hyperinsulinism)

IV. Surgical:
- A. Preoperatively, if malnutrition, liver inefficiency (especially history of recent jaundice or cholecystitis), intestinal operation[9,14], history of epilepsy, hyperthyroidism (with iodine), heart disease (with digitalis or epinephrine), diabetes (with insulin and fluids); hemorrhagic disease (with whole or citrated blood)[2]. During operation[20] or post-operatively, it has been frequently employed to prevent development of anuria following genito-urinary surgery, especially in prostatic resection and other obstructive nephropathies; surgery of chest and nervous system. I have been unable to find a single reference to the use of dextrose in circumcisions, however.

DOSAGE:

General principles: Despite the advocacy of continuous intravenous dextrose administration, some observers[5] including ourselves, believe that

single intravenous doses repeated one to three times daily are preferable to prolonged injection, which stimulates to increased insulin formation and upset body chemistry, local phlebitis, and overloading of cardiovascular system with fluids[1, 10]. In an adult, 60-75 gm. is the usual amount given, with subsequent doses of 50 gm. If given in a 25% solution, 30 minutes should be consumed in administering 25 gm.

We have found that where concentrated glucose solutions are needed and fluid definitely not desired, the use of ampoules already prepared commercially, containing 50 cc. of 50% glucose i.e. 25 gm., given directly from the warmed ampoule by luer syringe, to be simple and economical.

The exact dose needs be governed by age, disease and functional condition of normal routes of supply. In increased intracranial tension, either 50 cc. of 50% solution[10] or 100 cc. of 25% have been advocated. In cardiac asthma, Parker[21] uses 50 cc. of 50% solution (in addition to morphine, venesection, digitalis). In cardiac decompensation, either 25 or 50% solution, with twenty minims of digalen or eight of adrenalin. Shock or hemorrhage calls for rapid administration of glucose; the greater the shock, the more rapidly the solution may be given. A strongly hypertonic solution e.g. 25%, up to 300 cc. in an adult, gives more blood and hydrates the blood stream from the fluid lost in the tissues. Hemorrhage indicates the need of blood, but temporarily, an intravenous drip of 10% dextrose can be started, and citrated blood added. In dehydration, fluids should be administered as a weak solution (5-10%) in saline Ringers solution, or more conservatively[14, 22], unless fluids needed by blood stream route, they are given subcutaneously, rectally or by mouth, and glucose given intravenously. In diabetic acidosis, 10% glucose in saline, with 2 units of insulin covering each gram of sugar, works out well.

Routes of administration:

1. By mouth, if possible. Wood and Ross[10] state that "surprisingly large quantities can be given per day in the form of frequent small drinks." The sugar given should be glucose or fruit juice, not sucrose as they suggest may be used. Glucose may be obtained already commercially prepared in powder form, or in the form of inexpensive, pure candy made of glucose. Sucrose is sickening, especially if taken on an empty stomach, and Band's experiments[23] many years ago, demonstrated that even a 10% solution resulted in congestion of gastric mucosa. Lactose with a little lemon juice, may be used in 10% solution, without nausea or distress.

2. Rectal administration, while of use for absorption of fluids, has not been widely accepted during recent years as of great value for absorption of nutrition (the "nutrient enemata" of alcohol, glucose, egg and meat extract being an extinct medical fashion). Many investigators, among them Weld[24], have discovered that hourly blood sugars taken after rectal glucose, show no elevation. Others, notably recent workers at the Mayo Clinic, believe that the liver removes excess glucose at once and stores it.

3. Intravenous administration is the most widely employed, because the amount taken can be accurately determined and because the injection can be effective very rapidly.

4. Intraperitoneal administration is contraindicated in medical and surgical conditions of the abdomen, heart and lung. It seems difficult to give any amount of fluid or glucose without causing (a) increased intraabdominal pressure with resultant upward displacement of diaphragm and interference with cardiac and pulmonary function, or possible paralytic ileus; (b) irritation of peritoneum, with sterile peritonitis and distension. Blackfan[25] and Maxcy introduced this method, but discontinued it because of serious reactions. Sanford and Heitmeyer[26], by a new technique in preparing the sugar, have made the method safer, as stated by Beckman[8].

I once saw a girl of nine, suffering from second degree burns of one-third of body, who took large quantities of fluids by mouth for 12 hours. Then, intraperitoneal administration of 10% glucose in saline was started, and 500 cc. given over a period of three hours. The abdomen became distended, the child dyspneic, cyanotic, and exitus followed in two hours.

5. Intramuscular administration is a promising method, especially where glucose is needed in infants and children. Glaser[27] gives 20-40 cc. of 10% glucose in thigh muscles of infants; up to 100 cc. in older children and adults. We have given 5% glucose in saline as hypodermoclysis with no ill effects.

Contra-indications:

By some authors, there are considered practically no contra-indications. Hyman,[2] states "by the single technical procedure (of intravenous drip), the problem of nutrition and of the introduction of fluid, salts, drugs, blood and serum becomes automatic." It is our belief that dextrose and saline or Ringer's solution is not "nutrition" in any complete sense of the word, and they should be regarded as valuable adjuncts, but only temporary ones, until such time as necessary vitamins, minerals, protein, can be taken by the natural route.

Friedemann[3] who reported on the use of continuous intravenous infusion in 1913, says, "The infusion, no matter what solution or what additional drug is added, *is not a cure-all.* It is futile, even dangerous, in cachexia accompanying certain diseases of the heart, in arteriosclerosis, and in pneumonia in plethoric people, and in blood poisoning and sepsis, except gynecologic."

It would seem that the first contra-indication would be a normally functioning gastrointestinal tract.

Complications:

1. Local:

(a) In vein, range from simple phlebitis, to thrombosis, with possible (but rare) embolism.

(b) Perivenous tissues may necrose, if concentrated solution escapes from vein.

2. General:

(a) "Sharp chill, fever, shock and collapse, which may be quite serious"[2, 8] Titus and Dodds have stated, "reactions are almost always due to faulty technic either in preparation of glucose or method of its administration."[22] We have never seen anything more serious than a subjective sensation of warmth when the 50% solution was employed, except in the one moribund case given. The 10% dextrose in saline solutions already sterilized in gravity bottles, give no reactions even when kept for months, if administered at the rate of 8 cc. per minute, and the liquid is warmed to body temperature.

1. The causes of this reaction have been determined to be due to using old distilled water or water once opened, unboiled rubber tubing, marked difference in hydrogen in concentration; 2. impure glucose, carmelization of glucose from too high temperatures in autoclaving, and individual susceptibility. Complete details for preventing reactions can be found in articles by Thompson[28] and Titus and Dodd,[22] the latter quoted by Beckman.[8]

(b) Embolism:

(1) From local phlebitis, is apparently very rare when the cubital veins are used. Friedemann[3] after studying microscopic sections, concluded that any long infusion will result in phlebitis.

(2) Embolism due to dislodging of distant thrombosis, as in case cited. Friedemann[3] states, "if a fatal embolism occurs, the local thrombosis is an accidental concomitant phenomenon. The embolism is due to a distant thrombosis, against which we are helpless. . ."

(c) A theoretical possibility I have not seen mentioned, in regard to the long continued intravenous infusion of dextrose solutions, is the possibility of poor wound healing in the presence of an elevated blood sugar.

(d) Overstimulation of insulinogensis.[5]

(e) Circulatory embarassment, by overloading of cardiovascular system[1, 10] "Throughout the administration, watch should be kept for any sign of overtaxing. The first symptom is usually a sense of tightness in chest or of vague epigastric discomfort, and infusion should be temporarily discontinued. If it is disregarded, vomiting, respiratory distress, slight pulmonary edema, failing pulse and other signs of cardiac embarassment appear in that order." Wood and Ross.[10]

Conclusion:

An attempt has been made to summarize and criticize present dextrose therapy, with emphasis on these points:

1. That intravenous infusion is not always a harmless procedure, should only be given for definite indications, and should be discontinued as soon as natural routes are available.

2. That with present biochemical methods, we cannot hope to give complete nutrition for any length of time by an artificial copy of substances not completely understood or even identified, in some cases.

3. That the present wave of over-enthusiasm will abate, leaving a solid residium of fact concerning this valuable therapeutic weapon.

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PYLOROPLASTY IN THE TREATMENT OF DUODENAL ULCER

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The advent of aseptic surgery emboldened men of high courage and rare genius in the latter years of the nineteenth century to attack the problem of surgical treatment of peptic ulcer. The first great achievement was the application of surgical drainage of the stomach into the jejunum in cases of obstruction at the pylorus due to cicatrization resulting from repeated exacerbations of inflammation. Such patients were operated upon only after years of suffering and not until gastric retention with vomiting of undigested food made the diagnosis of pyloric obstruction quite clear. The brilliant success of gastroenterostomy in the relief of cases of this type led the bold spirits of the last century to seek methods whereby the disease "peptic ulcer" of the duodenum could be treated with surgical methods in the earlier stages, and much of the severe ordeal of waiting for obstruction to supervene could be prevented. Their enthusiasm no doubt carried them too far and many patients were operated upon and gastroenterostomy performed without clearly defined indications. The long waged battle between the medical and surgical forces over the best method of treating peptic ulcer is a direct result of some of the misguided enthusiasm of followers of these surgical pioneers. It is unfortunate that there still exists a general misconception of the indications for surgical treatment of patients who harbor peptic ulcers of the duodenum.

Jaboulay, whose name is also linked with the simple "bottle operation" for hydrocele, was probably the first to suggest the principle of pyloroplasty in surgery of the duodenum. Mikuliscz, whose name will always be associated with the relief of stenosis of the duodenum, conceived the principle to which his name is applied of enlarging the pyloric outlet. This hardy pioneer also left his name as a synonym for the well known operative procedure for the relief of cancer of the descending colon. The idea of surgical treatment of gastric disease spread to the United States and the names of Finney, C. H. Mayo, Deaver, Judd, Balfour, and their asso-

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ciates have had prominent places in the literature on the subject of pyloroplasty and similar operative procedures.

It is the purpose of this paper to present the author's experience with this type of operation in the surgical treatment of duodenal ulcer, to discuss the indications for its application and evaluate the end results. The material presented has been solely that of the author, in patients operated upon in private and including a few cases from the charity wards of the St. Louis City Hospital. All patients have been followed by personal observation and many of them have been reexamined by my clinical associates with careful checking of the postoperative gastric acidity and by roentgenographic methods. Because of obvious limitations a discussion of various types of medical therapy in duodenal ulcer is purposely omitted.

The scope of this paper does not permit a discussion of the theories concerned with the etiology of peptic ulcer of the stomach or duodenum. Probably several factors are combined in causing the symptoms and associated lesions. The experimental surgeons have presented evidence that ulcer is due to acid gastric secretion acting on the mucous membrane which lacks some neutralizing factor to adjust the physiologic balance between the secretions and enzymes of the digestive juices of the stomach, duodenum, pancreas and liver. Mann and Williamson[1] have produced experimentally by so-called surgical duodenal drainage peptic ulcers in dogs that are indistinguishable histologically from those found in humans. Quite recently Bollman and Mann,[2] corroborating the experiments of Von Wagoner and Churchill,[3] have described ulcers produced in dogs by prolonged ingestion of the drug cinchophen. These ulcerations are likewise quite similar to those seen clinically.

The indications for the selection of pyloroplastic methods in operating for duodenal ulcer are not altogether well defined. Mechanical factors are of great importance. The duodenum itself must be readily accessible so that it may be sutured without tension, and must be mobile or mobilizable. The caliber or size of the lumen of the first and second portion of the duodenum should be adequate. The amount of acute or chronic inflammatory induration in the duodenal wall will determine the ease with which the suturing can be done. The first portion of the duodenum when acutely inflamed is quite friable, easily torn, and very difficult to suture. It is comparable to wet tissue paper. In such circumstances one can readily comprehend the hazard of disaster in the event of a duodenal leak and subsequent fistula. Thus it is clear that the choice of pyloroplasty is to a great degree limited by the nature of the anatomicopathologic conditions present in the individual case. Surgical operations upon the stomach and duodenum should not be attempted by the inexperienced. The proper selection of the best procedure to apply in any given case must, therefore, be based upon an exact appreciation of the pathologic inflammatory change in the duodenum and nearby viscera, especially the pancreas, together with a clear conception of the surgical mechanics and anatomy involved in restoring the digestive function to a state approximating physiologic normality.

The type of patient in whom pyloroplasty is most frequently used is the young individual with a marked hyperacidity, who has a non-obstructing ulcer of the anterior wall of the duodenum. The lesion in these patients is usually associated with a marked duodenitis and quite severe symptoms. It is in these cases that stoma ulcers are apt to follow gastroenterostomy and therefore it is imperative to get relief of the associated severe pylorospasm which is accomplished by the removal of the anterior half of the pyloric sphincter as emphasized by Judd and Nagel[4] and by Deaver and Burden.[5] In overcoming the spasm a free physiologic regurgitation of alkaline duodenal juices from the liver and pancreas into the stomach is an important factor in the reduction of the hyperchlorhydria. The bleeding duodenal ulcer is easily treated by pyloroplasty only if it is easily accessible on the anterior wall. Unfortunately the hemorrhage is quite likely to be from a chronic indurated ulcer on the posterior duodenal wall, attached to the head of the pancreas and therefore not easily amenable to such a surgical approach. In the latter type of case gastroenterostomy with cauterization of the ulcer and inversion together with gastroenterostomy or a pyloric exclusion as suggested by Devine[6] would seem to be the procedure of choice. The cases in which bleeding is quite severe usually have a posterior wall ulceration and it is of great

importance to prevent further bleeding by eradication of the lesion where mechanically possible with minimal risk. Pyloroplasty can, however, be applied to many such cases by excision of the anterior duodenal wall and cauterization of the "kissing" or contact ulcer which is directly opposite on the posterior duodenal wall. The technic of this procedure has been described by Balfour.[7] One will occasionally see a patient with quite severe symptoms, hyperperistalsis, marked pylorospasm and hyperacidity, in whom sedation and dietetic regimen fails to accomplish a cure. Such individuals are apt to be extremely hypersensitive to all forms of stimuli, are restless, energetic, full of worries. Such a patient is a questionable subject for surgery but even in the absence of definite roentgenographic findings surgical exploration is indicated and pyloroplasty suggested as a method of relief of the pylorospasm. Not infrequently chronic disease in the appendix or gall bladder will be the cause of the patient's symptoms and definite relief afforded by removal of the offending organ. Such a series of cases were recently reported by Abel.[8] One cannot determine just which patient is best suitable for pyloroplasty until that patient is on the operating table with the ulcer exposed and after the surgeon has made a careful analysis of all influencing factors such as the age and general condition of the patient, the nature and extent of the inflammatory changes associated with the ulcer, the mechanical factors dependent upon the size and anatomic configuration of the individual such as the width of the duodenal lumen, its mobility and accessibility, the association or combination of other diseases such as cholecystitis, hepatitis, cirrhosis, splenomegaly, gastric ulcer, gastric carcinoma, or appendicitis. All of these are possible influencing factors in the proper selection of pyloroplasty in surgery for duodenal ulcer.

The contraindications to the employment of this type of procedure are entirely technical. If the pyloric end of the stomach and duodenum are fixed deep in the right upper quadrant of the abdomen, and the duodenum cannot be easily mobilized by incision of the adjacent peritoneal folds, if there is extensive cicatrix present throughout the duodenal wall it is better to abandon the idea of plastic procedure and depend on classic posterior gastroenterostomy which will give excellent results in the vast majority of cases. Marked pyloric obstruction due to extensive scarring, or deep craterous ulcers on the superior and inferior borders of the duodenum with fixation to the head of the pancreas or lesions which are quite distant from the pyloric ring are likewise best suited for gastroenterostomy; and in these characteristic lesions pyloroplasty should never be attempted. Consequently, one can realize that the use of plastic reconstructive procedures on the pyloroduodenal region is restricted to a small group of carefully selected cases. Indications for its use are, however, well defined and the inexperienced should not jump to the conclusion that it is safest to do a gastroenterostomy in all cases. Such logic is false. Many modifications of plastic operations on the pyloroduodenal region have been described and the experienced gastrointestinal surgeon in the presence of definite clinical and pathologic indications will be able to make a proper selection in the best interest of the patient.

There are several advantages afforded by pyloroplasty. Most writers point to the obviously lower mortality rate as compared with gastroenterostomy or resection. This may be more apparent than real when one considers that in general plastic operations are done on the better surgical risks. A second feature is the removal of the ulcer itself by a direct attack upon it. This, however, in the absence of exact information as to the etiology of peptic ulcer has the appearance of treating the effect rather than the cause of the disease. Academic questions need not concern us here provided that we can offer reasonable and safe means of relieving the patient's symptoms. Pyloroplasty also has the advantage of affording a complete inspection and palpation of all areas of the duodenum likely to be involved in the disease process, and a more intelligent approach to the future management of the patient in his postoperative and future dietetic control. In the event of the return of the patient's symptoms following such a conservative procedure it is always possible to reopen the abdomen and perform posterior gastroenterostomy or gastric resection if indicated. The operation of pyloroplasty carries very little shock and it may be readily used to advantage in the presence of associated lesions in the biliary tract where the surgeon, in order to remove all

possible causes for the patient's symptoms, finds it necessary to perform cholecystectomy or drainage of the common bile duct. Thus it is possible in older individuals of poor general condition to combine this conservative method in treating duodenal ulcer associated with cholecystitis and cholilithiasis whereas the performance of gastroenterostomy would carry with it a greater amount of surgical trauma and shock. The following case history illustrates this point:

Illustrative Case History: Mrs. J. L. K. came to the clinic complaining of severe epigastric pain coming in attacks and associated with markedly uncomfortable belching and inability to digest fat or greasy foods. The attacks of pain had been occasionally severe enough to require the administration of morphia for relief. The belching was relieved only at times by the use of alkalies and baking soda. Examination of the patient revealed a tall thin individual. Blood pressure was 140 MM of mercury systolic and 80 MM diastolic. Electrocardiographic tracings showed definite left ventricular preponderance with some myocardial damage. The peripheral vascular tree was sclerotic. Gastric acidity was total acidity 60, free hydrochloric 35. Examination of the blood serologically gave a negative Kline and Kahn tests. The erythrocytes were 4,750,000, leucocytes 8,000 per cubic millimeter. Urine, a trace of albumin. Cholecystography by the oral method demonstrated the presence of numerous gall stones. Examination of the gastrointestinal tract with the barium meal and enema was not done because of the definite evidence of gall stones. Operation was advised.

Figure 1. Arrows denote deformed duodenal cap—the site of a chronic anterior wall ulcer. There was a "kissing" ulcer posteriorly. The patient's symptoms were severe, characterized by recurrent bleeding with melena.

Operation: The abdomen was opened through a high right rectus incision. The gall bladder was found to contain multiple stones. There was a marked hepatitis overlying the gall bladder and the liver edge was rounded, and the organ quite firm and rubbery in consistency. There was also a definite ulcer scar on the anterior wall of the duodenum. There was a subacute inflammatory reaction present in the ulcer as evidenced by stippling, punctate ecchymosis, and the formation of small blebs. The head of the pancreas was definitely harder than normal and this consistency extended throughout the organ. It was decided to perform cholecystectomy and pyloroplasty, excising the duodenal ulcer and inspecting the posterior wall which was found to be free from contact ulceration. The duodenal cap together with the anterior half of the pyloric sphincter was excised and the continuity of the gastroduodenal wall reestablished by a direct closure with chromic catgut reinforced with silk interrupted sutures. The appendix was likewise subacutely inflamed and was removed, ligating and inverting the stump. The abdomen was closed without drainage.

Post-Operative Course: The patient was treated in the usual manner by administration of fluids parenterally for 72 hours and then was permitted small feedings of cooked cereals, jello, junket; thereafter the dietary was increased in accord with the principles well established in the medical management of acute ulcer cases. She made an uneventful recovery, left the hospital on the twelfth day following operation and has remained free from gastrointestinal symptoms.

The foregoing case report illustrates the advantages of the pyloroplastic type of procedure

on the relatively poor risk patient and in the presence of associated lesions of the pyloroduodenal region all of which may produce similar symptoms. This patient would not have been relieved of her symptoms by cholecystectomy alone, nor would she have been cured by an attack solely confined to the chronic duodenal ulcer not to mention the subacutely diseased appendix. She was a poor surgical risk because of her cardiovascular system and a minimal amount of surgery in the shortest possible time commensurate with accurate workmanship was important in diminishing the necessarily greater operative risk. It was found necessary to combine pyloroplasty with surgical procedures on the biliary tract in five cases in the series presented here. All of these patients recovered without complications.

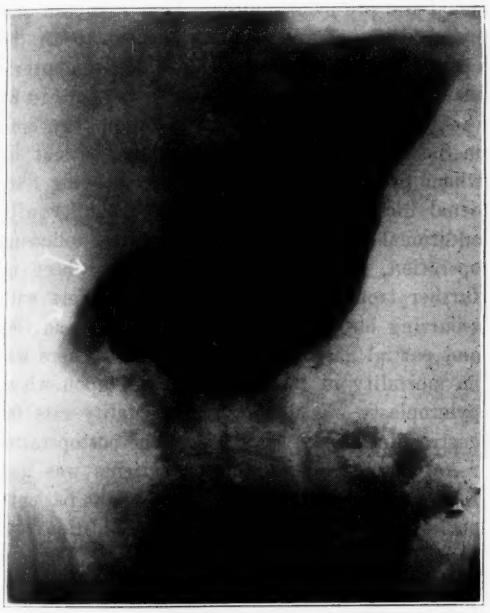

Figure 2. Post-operative roentgenogram two and one-half years following operation. Note absence of duodenal cap—yet smooth contour of bowel wall. Fluoroscopically the duodenum is freely movable, indicative of absence of adhesins which would cause fixation, a source of persistent symptoms.

The chief advantages and indications for the employment of a direct attack on a duodenal ulcer lie in the relative safety of these operations and freedom from postoperative complications. It is a more physiologic operation in that it provides free egress for the gastric contents into the duodenum rather than in the jejunum where stomal ulceration is prone to develop in at least approximately three per cent of cases in the opinion of Balfour.[9] Other authorities such as Berg[10] and Straus[11] report the incidence in much higher percentages. Pyloroplasty will circumvent the possibility of such complications in cases where its applicability is suitable. The frequency of selection of plastic procedures on the pyloroduodenal area will vary with the experience of the surgeon; the greater the experience the more frequently will he be able to apply these principles in well chosen cases.

The technical details in performing pyloroplasty are not extremely difficult. The same general principles of making a leak-proof anastomosis with sutures anywhere else in the gut are employed. The methods suggested by Judd and Nagel[4] and by Balfour[7] have been used exclusively in this series of cases. In brief, the operations consist of opening the abdomen, through a high right paramedian incision to get adequate exposure of the contents of the right upper quadrant. The contents of the upper abdomen including the liver and biliary tract, as well as the stomach and duodenum, are carefully inspected and palpated. Should pyloroplasty then be decided the procedure of choice, the operative site, the pyloroduodenal region, is elevated into the field and a Doyen clamp inserted through the gastrohepatic and gastrocolic omentum in such a way as to place the pyloric end of the stomach between the rubber covered blades of the clamp. This maneuver facilitates steady exposure of the stomach and duodenum and is more easily maintained in position by the first assistant. Steady retraction of the abdominal walls is provided by a second assistant. If advisable the interior of the duodenum may be palpated by an exploring finger inserted through a small incision placed on the gastric side of the pylorus. Should there be extensive multiple ulceration or a large posterior wall crater, pyloroplasty can be abandoned and posterior gastroenterostomy or gastric exclusion proceeded with as an alternate choice. Pyloroplasty having been definitely elected, retraction sutures are then placed at the superior and inferior border of the pyloric muscle, preferably including the muscle itself in the traction suture which provides distinct demarcation of the posterior half of the muscle during the subsequent steps of the operation. The tissue to be excised is then marked

off by application of Doyen forceps at suitable points. The ulcer bearing segment of the duodenal cap together with the anterior half of the pyloric sphincter muscle is then wholly excised with knife or scissors. Following this step a wide exposure of the first portion of the duodenum and its posterior wall is obtained and it is quite easy to carefully sponge away the duodenal and biliary secretions affording complete inspection of the entire duodenal mucous membrane. At this stage one can readily provide for the "kissing" or contact ulcer by cauterization excision and suture. The anterior walls of the duodenum and stomach are then directly reunited with a continuous suture of size 00 Dulox catgut, using the surgical and atraumatic curved needle. The first row of stitches includes the mucous membrane and small hitch into the muscle layer. A second inverting row of sutures is then placed so as to approximate accurately the serous layers of the pyloric duodenal walls. The operation is concluded by two or three reinforcing stitches of silk which includes adjacent tags of fat from the gastrohepatic and gastrocolic omenta. Finally a suture is placed fastening the anterior wall of the stomach to the falciform ligament. This step is designed to hold the pyloric end of the stomach in the upper quadrant to the right of the midline thus preventing tension against the suture line. Appendectomy is usually added as a secondary procedure. If indicated, operative work may be performed on the biliary tract either before or following operation upon the duodenum. The abdomen is closed in layers without drainage unless deemed a necessary adjunct to added procedures.

Postoperative treatment is important. Fluids should be administered parenterally for a period of 72 hours. A continuous suction siphonage apparatus, modified from that suggested by Wangensteen and Paine[12] is employed to keep the stomach free from all secretion. This prevents postoperative gastric retention and maintains a non-acid medium in the stomach as denoted by frequent testing with congo-red indicator paper. Tension on suture lines in the extremely important early period of healing is avoided. After the third day the patient is given liquid and soft foods such as junket, jello, custards, then cooked cereals—evaporated milk formula. The dietary is subsequently increased in accord with the medical principles employed in management of ulcer cases. After a period of three months more gastronomic liberties may be permitted.

The accompanying table comprises a summary of our experience in the surgical management of peptic ulcer of the stomach and duodenum. It will be noted that pyloroplasty was performed in 18 patients out of a total of 150 operative cases. Bilroth I type of pylorectomy was used in 5 additional cases of sclerosing, mobilizable, duodenal and pre-pyloric ulcer. Thus it is seen that pyloroplasty or pylorectomy seemed to be the operation of choice in one case in six or approximately 16%. Gastroenterostomy was done in 88 cases or 58.6%. Relief of symptoms by both methods is uniformly good. One patient on whom pyloroplasty was done for bleeding duodenal ulcer had the misfortune to suffer with additional hemorrhage three years following operation, since which time there has been no further trouble. In the event he suffers with recurring bleeding, re-operation will be advised and partial gastrectomy performed. There was no mortality in the series of cases upon whom pyloroplasty was done. The mortality rate for gastroenterostomy was 2.3%. The postoperative recovery in the pyloroplasty patients was uniformly without incident. In five of the patients, cholecystectomy was performed in addition with equally smooth postoperative course. The end results in pyloroplasty have been uniformly satisfactory and this procedure occupies a place of great importance and usefulness in the surgical treatment of duodenal ulcer and associated lesions in the right upper quadrant.

SUMMARY AND CONCLUSIONS

1. A series of cases of peptic ulcer of the duodenum and stomach treated by various surgical methods is reported.

2. The indications and advantages of certain operative procedures in surgery for duodenal ulcer are discussed.

3. The advantages of trans-nasal suction siphonage in the postoperative management of patients undergoing gastric operations are reaffirmed.

4. The importance of specialized knowledge and training and experience in the proper selection of surgical procedure for duodenal ulcer is stressed.

5. The technic of pyloroplasty is described.

6. Pyloroplasty has a definite and important place in the surgical management of duodenal ulcer because of its more physiologic nature and its comparatively greater freedom from immediate operative mortality, absence of complications and satisfactory end results.

ANALYSIS OF METHODS SURGICAL AND RESULTS IN PROCEDURES FOR PEPTIC ULCER

Operation	No. of Cases	Symptom Free	Incomplete Relief Persistent Dyspepsia (mild)	Hospital Deaths Following Operation	Per cent Operative Mortality	Remarks
Gastro-Enterostomy	88	81	7	2	2.3	Death in Cases Due to Vicious Circle and Intestinal Obstruction
			Recurrent Bleeding			
Pyloroplasty	18	16	1	0	0	Patient With Poor Result (Bleeding) Refuses Re-operation
Bilroth I Pylorectomy....	5	5	0	0	0	All Patients Entirely Free of Symptoms
Closure of Perforation and Drainage	20	12	3	2	10	Deaths from Peritonitis Due to Delay in Getting Operated Upon
Excise Jejunal Ulcer.....	1	1				Followed Gastro-enterostomy Done Elsewhere in Presence of Acute Perforation
			Complain of Peristaltic Rushes			
Gastric Resection	18	16	2	1	9.2	Eight Patients Proved to Have Malignant Ulcer
		Approximately 90% Complete Symptomatic Relief	Approximately 10% Incomplete Relief or Poor Results			
Total Cases	150	130	13	5	3.3%	Average Per cent Operative Mortality for Whole Series

Lister Building

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My thanks are due the Soper Mills Gastro-enterology Clinic for permission to use their files and follow up records on many of the patients presented in this paper.

THE DIAGNOSTIC EXAMINATION

H. P. MILLER, M. D., F. A. C. S.

ROCK ISLAND, ILL.

Efficiency in diagnosis and conservation of time are two major factors determining the technique of a general examination. The general method of approach and the value of information obtained from routine laboratory tests and expensive instruments of precision demand periodical reconsideration both from a practical and economic standpoint.

History. If we consider the history in such

a general examination, we know it is universally accepted as of the highest value, and our experience fully confirms this view. Yet, in a busy office, one must strike somewhat of a medium between the detailed history form as taught to the interne and the medical student and used in a teaching hospital and the brief notes on a casual office case. The past history can assume a more or less routine form which can be delegated to a well trained registered nurse or even to an intelligent lay assistant who has been personally educated to the methods of the individual physician. For our purposes, we have a form which fairly completely takes in the phases of past illnesses, accidents, and operations with inquiry into such additional data as we have found valuable, such as all information possible about previous examinations and former x-ray films. The social history is condensed to a brief extract of travels, habits, marital state. The family history contains a slight deviation from the standard method in that we go into the glandular characteristics of the antecedents, whether they were tall and thin or short and stubby, the presence of goiter, excessive overweight, nervous breakdowns, number of children, and relative position of the patient in the series.

For the present illness, we have devised a form, the original idea for which was given to us at the Lahey Clinic. In taking the present illness, the usual entrance complaints are set down with their duration, and then an attempt is made to build up syndromes from the patient's replies. Along the left hand column of the sheet, common symptoms referable to the various systems of the body are detailed where they can be checked or crossed out, thus saving a great deal of time and manual effort. Considerable stress is placed on the nervous system because of the frequent simulation by neurotic complaints of surgical syndromes. Investigation here is on a tripartite front. Symptoms are classified under mental, visceral, and sensory-motor headings. In addition, environmental factors are inquired into. An attempt is made to classify the personality type, if abnormal, from this information and the type reaction, such as anxiety state, hysteria, psychasthenia, neurasthenia, etc.

Physical Examination. The physical examination, in addition to the ordinary things, must stress certain neglected phases which will enable us to see our patients and their aches and pains in an entirely different light. I refer to postural considerations and the glandular earmarks. The relationship of posture to bodily pains in the abdomen or elsewhere and their recognition is a great help in the treatment of many cases and will prevent much unnecessary surgery. The recognition of the glandular makeup, particularly the common hypogonad type because of their visceroptotic habitus, is important.

A case in point to illustrate the necessity of recognizing the visceroptotic habitus is that of a patient, female, aged 28 years, who consulted me first on October 9, 1934, complaining of floating kidneys. For five years, she had had a dull pain in the left lumbar region, was very much underweight, nervous, exhausted readily, and had menstrual difficulties. She had been subjected repeatedly to cystoscopies for dilatation of "strictured" ureters. An intravenous pyelogram by me revealed ptosed kidneys, a part of her generalized visceroptosis and poor posture. An increase of 28 pounds in weight by means of milk and cream, rest, exercises to improve the posture completely relieved her nervousness, and all backache disappeared.

The first inspection, then, should stress the general appearance of the patient, standing and completely stripped. Neuromuscular tension should be noted while talking to the patient and obtaining the history to help evaluate any neurotic basis. The patient's posture, nutrition, muscles, glandular characteristics, varicose veins, and feet are noted standing up, also the condition of the skin and hernias. Foot impressions are made on every patient and preserved with the record for comparison of the results of treatment where abnormal conditions are found.

Laboratory. For surgical diagnosis, we might consider the subject under the acute and chronic classifications. In the acute conditions, we are concerned chiefly with the local examination and such general features and brief laboratory examinations as help to determine the surgical risk. A point which experience has taught me, however, is that these minimal laboratory procedures, urinalysis, red blood count, total white blood count, Schilling differential count, and hemoglobin, must not be neglected. The slight time necessary to obtain a urinalysis and blood exam-

ination may save many personal regrets and untold misery to the patient.

A case in point illustrating the necessity of insisting upon the minimal laboratory examinations is that of a man fifty years old who had been treated in a hospital for several days for a sore throat. I was called in consultation and found him *in extremis* from an acute laryngeal obstruction. No urinalysis or white blood count had been done. An attempt was made to get a specimen, but he could not void. A tracheotomy was performed at once under local anesthesia. Urine was then secured by a catheter and a huge amount of sugar found. Death occurred in coma a few hours later in spite of large doses of insulin.

In the chronic case, which may not be so clear cut and in which a careful sifting out process must be made to separate the chronic medical conditions, chiefly neuroses, from the conditions amenable to surgery, a careful and detailed examination of reasonable thoroughness must be made. The careful diagnostician must develop a systematic examination technique in order to prevent errors of omission.

Diagnostic errors crop up where such a system is not followed or where there is lack of personal contact. An illustration of the above is shown by two recent cases. The first, a male, aged 47 years, was seen on July 9, 1935. He had been examined previously by two physicians; one told him he had an enlarged gall bladder and said that the x-ray pictures showed trouble. In another very good clinic, the patient had pictures taken of the gall bladder and stomach and was told that there was nothing wrong with him and that the whole condition was a nervous one. That was in spite of the fact that he had a large mass in the right upper quadrant which should have suggested an enlarged gall bladder to any intelligent examiner. The fallacy here was that the head of the clinic did not examine the patient's abdomen. The roentgenologist fluoroscoped him but probably never touched the abdomen except with heavily gloved examining fingers. The clinician attempted to give advice without a personal examination of the patient. A second case in point is that of a female, aged 42, seen September 17, 1935, who came in complaining of swelling in the lower abdomen and nervousness. She had had a history of three previous abdominal operations with much choking in the throat and smothering in the chest and had the appearance of corpulency. In a well known clinic, she was put down as neurotic and told that she was getting fat, although a pelvic examination by myself revealed a fibroid tumor reaching to the umbilicus. Undoubtedly, in that case also, poor correlation of the various examinations was made.

A not uncommoon error in diagnostic work is a neglect of laboratory measures which are well known and will require only a slight amount of time but will differentiate a pregnancy from a tumor in the abdomen. I refer to the Aschheim-Zondek test in the early months of pregnancy and a good flat film after the fourth month. It is important in diagnosis to make frequent examinations with the patient stripped, and also a great mistake to minimize any patient's complaints and not to carefully note them all by detailed notes at every visit. The only way this can be consistently done is by dictating to a trained assistant, for the physician will not or cannot spend the time to make adequate case notes himself in a busy practice.

My attitude towards x-ray study is the feeling that too much is delegated to the hospital department and to non-medically trained technicians; the physician is apt to accept complacently such reports as final. I can see no reason why the average surgeon cannot become proficient in fluoroscoping stomachs, appendices and colons as well as or better than the x-ray man. He is expected to make a diagnosis with the educated finger tips in palpating the abdomen. Should he not better be able to feel when he has sight added to his touch? The only things that militate against this in the average hands are the time, the expense, the space and the natural resistance to learning a new procedure or mastering a new technique.

All recognized laboratory procedures should be available and exhaustively investigated where a lead is given as to a helpful procedure, but an effort must be made to avoid useless routine work. Routine work, though, for thorough diagnosis, to my mind has an irreducible minimum. For instance, I stress the great importance of determining renal function in surgical diagnosis. It is true, the blood count is important, but its information is obvious when it is abnormal.

The same holds true of the tuberculin test, the metabolic test, the Kahn test, the coagulation time, and sedimentation time, all of which we consider routine. The ordinary urinalysis, even a 24 hour specimen, may pass over slight grades of renal insufficiency, and the ordinary blood chemistry may overlook slight impairment, although the phthalein functional test is fairly reliable in picking up early trouble. We have a rule that any surgical patient over 40 years must have a Mosenthal renal functional test and any younger patient where the kidneys are suspected from past history or where the routine 24 hour specimen reveals a low specific gravity or a nycturia. Minimum routine laboratory procedures in the chronic cases, as mentioned above, must be supplemented by additional tests and the examiner be sufficiently familiar with them to interpret them and knew when they are indicated. I refer to blood urea, blood sugar, intravenous pyelography, intravenous gall bladder dye, duodenal drainage of Meltzer, bacteriological smears and cultures, the electrocardiogram, gastric analysis, stools, sputum examination, blood typing.

We should see the patient as a whole from a medical standpoint as a physician, and secondarily, as a surgeon, as that is merely a mode of therapy. Diagnosis in general surgery should know no limitation as to field. More patients coming to the surgeon turn out to be medical cases than surgical. Undue haste in making any examination may be responsible for a postoperative death. Over specialization of thoughts to see every patient surgically is a wrong attitude. A great help for me is to study the record carefully when complete, then, make a brief written summary arriving at a final diagnosis in an unbiased manner only on the evidence therein contained while freshly correlated in the mind.

Such an examination is detailed, has multiple phases, and requires trained assistants and an adequate record system. The form should be routine, but not fixed. It is a constantly fluctuating thing which is continually adding and detracting as experience throws out the worthlessness of a test and adds a new one. For example, I made blood ureas consecutively on 300 patients who submitted to complete examinations before I would decide that the test was worthless in the ordinary course of work. Such a technique can only be developed by personal experience, depending upon the individual man's training and type of practice. Commercial blanks for this purpose are of but little value.

We should think of ourselves as physicians primarily who are practicing surgery. Webster's academic dictionary defines a physician as follows:

"A person skilled in physic, or the art of healing; a doctor of medicine."

Surgery still contains a large element of psychotherapy, a phase of the art of healing. Reports in the literature of successful series of cases must be read between the lines in the personality of the surgeon. The successful surgeon is also a great physician. If you don't believe it, make the rounds some morning with a good surgeon and listen to him practicing medicine in dealing with his patients. Yet, this is precisely the element that never appears in the reports.

Summary. A careful routine method of examination, comprehensive but practical, is necessary if we are properly discharging our responsibilities when we assume the making of a general examination. Useless tests and multiplication of laboratory procedures is to be guarded against. Recognition of glandular characteristics and postural deviations on the part of the physician will clear up some puzzling causes of unrelieved symptoms. A personal study and summary of the whole record is necessary to correlate the various findings and arrive at a correct diagnosis.

TRAUMATIC TONSILLECTOMY

Two Cases

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EVANSTON, ILL.

Case 1: R. J., aged three years, was riding a tricycle, from which the rubber handles had been removed from the handle bar leaving the sharp circular steel ends exposed. The tricycle overturned throwing him in such a manner as to cause the exposed tubular steel handle to shoot into his mouth. None of the teeth were damaged. The left anterior pillar was struck tearing it slightly. The left tonsil was divulsed, producing a clean separation with a smooth capsule, leaving only a small lingual attachment. Under gas induction ether anesthesia, the tonsil was severed from its small lingual attachment and the small tear in the anterior pillar repaired. The other tonsil and a hypertrophied adenoid

mass were removed. The end result was a symmetrical, normal appearing throat.

Case 2: H. L., aged 8 years, was second in a train of three sleds. The first sled struck an elevation which elevated one runner and retarded its progress. The second sled overtook the first and the high runner went into the boy's mouth. The teeth were not injured. There was moderate tearing of the right anterior pillar. The right tonsil was completely separated except for a small lingual attachment, and the capsule was smooth. The muscle in the tonsil fossa was slightly torn. A slightly deeper injury might have seriously involved the deep vessels of the neck. The anterior pillar was repaired and two sutures were taken in the torn muscle in the center of the tonsil fossa. The opposite tonsil and a hypertrophied adenoid mass were removed. The throat healed without infection. The end result was a symmetrical, normal throat.

OTOSCLEROSIS IN IDENTICAL TWINS

George E. Shambaugh, Jr., Chicago (*Journal A. M. A.*, April 6, 1935), adds three more instances to the two instances reported previously of otosclerosis in identical twins. He states that if the premise were strictly correct that the hereditary anlage is exactly equal in a pair of identical twins, then one could say with assurance that there are external influences which can affect the age of onset and rate of progress of clinical otosclerosis, and this would be saying a great deal. However, there is one disturbing fact that must be taken into account and that is that identical twins develop from the same egg, but from different halves of the egg, and their hereditary environment may differ slightly just as the two halves of any person are slightly different. Thus, otosclerosis often begins first in one ear and may occasionally become very advanced in this ear before the onset of progressive deafness in the opposite ear. The difference in the twins may correspond only to the difference in the two ears of any one with otosclerosis. However, the fact that the lesion developed first, in every instance, in the twin who was much more susceptible to head colds is at least suggestive evidence that head colds are an activating influence on otosclerosis. On the basis of the observations in identical twins head colds apparently have an activating influence on otosclerosis similar to the influence of pregnancy. This conclusion coincides with clinical experience in the majority of patients with otosclerosis. It does not seem to be due to direct extension of inflammation through the eustachian tubes, though this possibility must be considered. The effect may be entirely systemic, by blood stream transmission of toxins. Further observation of otosclerosis in identical twins will confirm or refute these conclusions. Meanwhile, one can feel justified in any reasonable measures to reduce the susceptibility to head colds in persons with otosclerosis.

IT IS MORE BLESSED TO GIVE THAN TO RECEIVE

Any progress made in the art of medicine, and any success that may have been achieved by any of its votaries, is due to the unselfishness with which those who knew gave to those who knew not. The only way that we, as physicians, can repay our obligations to the great profession of which we are a part, is to contribute our mite to the common fund of medical lore. Make your contribution now!—W. A. H.

Society Proceedings

CHICAGO MEDICAL SOCIETY HOBBY SHOW

April 1, 1936

The first hobby show put on by the Chicago Medical Society proved a most successful affair. In spite of the blizzard that ushered April in almost 200 attended the dinner and the large Spanish Room of the Medical and Dental Arts Club was thronged with interested spectators from six o'clock to midnight, more than 800 visiting the show. The exhibits were diversified and enlightening, and a spirit of good fellowship was prevalent.

During the evening in the West Room of the Club the motion picture of "Wings Over Mt. Everest" was exhibited, followed by some excellent motion pictures made by Dr. and Mrs. Julius H. Hess, "Hunting With a Camera in the Rainy Lake District," catching deer, moose, bear and caribou unawares; also black bass, walleyed pike and muskellunge, "where mother has to stand the gaff as well as father when she goes on such a trip."

Following the picture show President Hess introduced Dr. Morris Fishbein, who spoke on "Doctors and Their Hobbies." In closing Dr. Fishbein expressed the opinion that the hobby show put on by the Chicago Medical Society compared favorably with some of the best shows previously put on in this country and elsewhere.

A complete list of exhibitors and exhibits will be found below:

A. H. Andrews, Sr., 30 North Michigan Avenue: Archery, bows and arrows made by himself.

Benedict Aron, 6155 South Kedzie Avenue: 350 souvenir spoons.

Joseph Beck, 185 North Wabash Avenue: A schematic drawing of a hobby horse demonstrating his various hobbies.

E. A. Brucker, Wade Harker, John S. Nagel, 4458 West Madison Street: Pictures of hunting and fishing trips, head of a mountain sheep, walleyed pike.

Walter C. Burket, 636 Church Street, Evanston, Illinois: Words and music, composed by himself.

Eugene Carey, 30 North Michigan Avenue: Etchings.

H. W. Cheney, Guy M. Cushing, Hugh N. MacKechnie, Hiram J. Smith: Lawn bowling, pictures, balls, etc.

E. L. Cornell, 122 South Michigan Avenue: Stamp collection.

M. H. Cottle, 30 North Michigan Avenue: Chinese pottery, child portraiture.

H. Hoyt Cox, 2376 East 71st Street: Water colors and etchings.

S. M. Edison, 185 North Wabash Avenue: Bird's eggs, together with pictures of birds.

Walter Fischer, John H. Gilmore, 185 North Wabash Avenue: Wood sculpture, photography.

C. F. Friend, 1601 West Garfield Boulevard: Rex rabbits. Exhibit of live rabbits, also furs.

H. Fremmel, 1001 North Damen Avenue: Oil painting of Dr. Fremmel, painted by himself.

A. H. Geiger, 854 Fullerton Avenue: Drawings.

A. J. Giacobe, Oak Forest, Illinois: Pictures painted on glass.

J. D. A. Gatsos, 25 East Washington Street: Collection of paintings.

Emery Grimm, 55 East Washington Street: Exhibit of caricatures of Viennese professors and modern portraits.

Emil Grubbe, 6 North Michigan Avenue: Stamp collection.

F. P. Hammond, 6138 Cottage Grove Avenue: Farm. Pictures, charts, etc.

Clarence Hennan, 7602 Paxton Avenue: Philippine weapons.

R. M. Hutchison, 4046 Armitage Avenue: Wood sculpture.

Evaline St. Croix Hash: Silver fox farm. Exhibited three scarfs and literature together with photographs. Spice cake.

Roy Kegerreis, 1150 North State Street: Paintings and drawings.

Maximilian Kern, 55 East Washington Street: Pictorial photography. Some in natural colors.

J. D. Kirshbaum, Cook County Hospital: Stamp collection.

M. Koenig, 1415 Rosemont Avenue: Pyrography.

E. Levisohn, I. Sherry: Photography. Cabinet work, drawings and cartoons.

A. Levinson, 30 North Michigan: Medical history in medallions.

Julius Levy, 3354 West Roosevelt Road: Doll house—plaster work, wood carving—statues, Coach and Four.

Arno B. Luckhardt, 5216 Greenwood Avenue: A neglected chapter in the history of anatomic illustration. Anatomical manikins of French, German and Italian construction. Period of 1700 to 1800.

Carolyn MacDonald, 30 North Michigan: Interior—rummaging and decorating. Pictures.

E. T. McEnery, 4458 West Madison Street: Photography.

William A. Mann, Sr., 30 North Michigan Avenue: Doll furniture.

Frank J. Novak, 30 North Michigan Avenue: Cabinet work.

Edward H. Ochsner, 2155 Cleveland Avenue: Hickory Point Farm.

H. G. Ohls, 1618 Juneway Terrace: Copper etchings.

Stanley Przygocki, 4868 Werner Avenue: Stamp collection.

George Marchmont Robinson, 8151 Cottage Grove Avenue: Oil paintings.

Arthur Sandler, 2700 Devon Avenue: Coin collection.

Leslie W. Schwab, 1811 East 63rd Street: Enlarged photographs. Scenic pictures.

J. J. Singer, 3605 Lawrence Avenue; Oil paintings and statues.

Robert Sonnenschein, 180 North Michigan Avenue: Collection of portraits and engravings of doctors, old books on ear, nose, throat and acoustics.

S. C. Stanton, Hinsdale, Illinois: Stamp collection.

Frederick Stenn, 841 East 63rd Street: Specially constructed phonograph.

Frederick C. Test, 30 North Michigan Avenue: Bird banding in Chicago. Pictures, bands, literature.

F. P. Thompson, 3650 Lake Shore Drive: African hunting trip. Pictures and trophies.

Max Thorek, 850 Irving Park Boulevard: Creative photography.

C. K. Timmons, 4753 Broadway: Cartoons.

Bertha VanHoosen, 25 East Washington Street: Pictures of distinguished sons and daughters of medical women.

KANKAKEE COUNTY

The Members of the Kankakee County Medical Society were guests of Dr. Robert R. Smith, managing officer of the Kankakee State Hospital, and Mrs. Smith at a six o'clock dinner on the evening of April 9. The meeting was also attended by physicians from Ford, Iroquois and Livingston Counties. About 60 physicians were present.

The meeting was opened with a short address by the Hon. A. L. Bowen, director of the Department of Public Welfare, Springfield, on the subject, "Society's Fight Against Nervous and Mental Diseases." Mr. Bowen also announced that Dr. Isabel Weaver of the staff of the Kankakee State Hospital had been awarded first honors for her interpretation of the book, "Asylum," by William Seabrook.

The scientific program was in charge of Dr. A. A. Low, assistant professor of neuro-psychiatry of the Medical department of the University of Illinois, and who is also assistant alienist of the Department of Public Welfare, assisted by members of the hospital staff; presented and discussed cases to illustrate types of mental and nervous disorders more often seen in their early manifestations by the general practitioner.

C. A. Perrodin, Secretary.

Marriages

Richard L. J. Kemel to Miss Margaret Pennington, both of Chicago, March 23.

Raymond J. Kennedy to Miss Bernice Elaine Sitar, both of Joliet, Ill., February 11.

Personals

Dr. Jacob Frank observed his eightieth birthday, March 16.

Dr. John A. Wolfer, Chicago, addressed the Peoria City Medical Society, March 17, on "Carcinoma of the Rectum and Colon."

Dr. Byrl R. Kirklin, Rochester, Minn., among others, presented "A Roentgen Study of the Stomach and Duodenum After Operation" before the Chicago Roentgen Society, April 9.

Dr. Mary G. Schroeder discussed "The Diagnosis and Treatment of Psychoneurosis" before the Chicago Council of Medical Women, April 3.

At a meeting of the Kankakee County Medical Society in Kankakee, March 12, Dr. Louis W. Sauer, Evanston, discussed whooping cough.

Dr. J. P. Greenhill read a paper on Problems in Obstetrics and Gynecology before the Kalamazoo Academy of Medicine, April 21.

Dr. Roland M. Klemme, St. Louis, addressed the Vermilion County Medical Society, March 3, on "Traumatic Injuries of the Central Nervous System and Their Emergency Treatment."

Dr. Paul C. Schnoebelen, St. Louis, addressed the Madison County Medical Society in Highland, March 6, on bone tumors, and Dr. Leith H. Slocumb, St. Louis, rectal diseases and their treatment.

The Adams County Medical Society was addressed in Quincy, April 13, by Drs. Bernard Portis and Max Cutler, Chicago, on "Acute Surgical Abdominal Conditions" and "Recent Advances in the Treatment of Cancer" respectively.

The Chicago Society of Internal Medicine was addressed, March 23, among others, by Dr. Harry A. Singer on "Pyrexia Due to Gastric Carcinoma."

Speakers before the Hancock County Medical Society, March 2, were Drs. Harold Swanberg and Walter M. Whitaker, Quincy, on "Modern Treatment of Cancer of the Uterus" and clinical use of electrocardiography respectively.

At a meeting of the Perry County Medical Society in Duquoin, March 5, Dr. Eugene Lee Shrader, St. Louis, discussed "Coronary Disease" and Dr. James L. Mudd, St. Louis, "Surgical Treatment of Lung Suppuration."

Dr. Antoine Lacassagne, associate director of the Curie Institute of Paris, lectured at Michael Reese Hospital, March 10, on "Modern Conception of Radiation in the Treatment of Cancer."

At a meeting of the Chicago Gynecological Society, March 20, Dr. Harold H. Hill, Oak Park, Ill., among others, discussed "The Value of the Sturmdorff Cone for Biopsy Material in the Detection of Early Carcinoma of the Cervix Uteri."

At a meeting of the Chicago Pathological Society, April 13, speakers included Drs. Paul E. Steiner on "Malignant Lymphogranulomatous (Hodgkin's Disease) Cirrhosis of the Liver" and Sol R. Rosenthal, "Tissue Lymphocytes in the Prognosis of Hodgkin's Disease."

At a meeting of the Chicago Surgical Society, April 3, speakers included Drs. Robert B. Malcolm on "Surgery of Salivary Glands"; Graham A. Kernwein, "Effect of Starvation on Fracture Healing," and Sumner L. S. Koch, "Osteomyelitis of the Bones of the Hand."

Speakers before the Chicago Society of Industrial Medicine and Surgery, March 25, were, among others, Drs. James H. Hutton on "Endocrinology in Industrial Medicine"; Philip H. Kreuscher, "Surgery of Arthritis," and Rosco G. Leland, "Changes Confronting Modern Medicine."

At a meeting of the St. Clair County Medical Society in Belleville, April 1, Dr. Edward W. Cannady, Jr., East St. Louis, discussed "Diagnosis and Treatment of Cardiac Arrhythmia." At the session in East St. Louis, April 2, Dr. James S. Templeton, Pinckneyville, addressed the society on "Responsibility of the Individual Doctor to His Profession."

Dr. Archibald L. Hoyne presented a paper before The Nebraska State Medical Association at Lincoln on April 9. His subject was "Treatment of Meningococcic Meningitis Without Intraspinal Therapy." He also addressed The Northern Tri-State Medical Association at Fort Wayne, Indiana, on April 14. His topic was "Progress in the Management of Contagious Diseases."

Dr. Chester C. Guy, of Chicago, addressed the staff of the DeKalb Public Hospital and DeKalb County Medical Society on Pathology of Breast Tumors, April 7, at DeKalb, Illinois.

Dr. Q. U. Newell, Professor of Gynecology, Washington University, St. Louis, gave an illustrated lecture on "Cancer of the Uterus" before

the Madison County Medical Society at St. Joseph's Hospital, Alton, Friday, April 3, 1936. Thirty-six physicians were present.

News Notes

—Dr. Charles F. Geschickter of Johns Hopkins Hospital, Baltimore, conducted a tumor clinic at Silver Cross Hospital, Joliet, March 25. This was the third annual clinic of its kind. The first was conducted by the late Dr. Joseph C. Bloodgood, Baltimore, and the second by Dr. Geschickter.

—Charles Judson Herrick, Sc.D., professor emeritus of neurology, University of Chicago, delivered the fourteenth Pasteur Lecture of the Institute of Medicine of Chicago, Friday evening, April 24, in Thorne Hall on McKinlock Campus, Northwestern University. His subject was "Neurobiological Foundations of Modern Humanism."

—At a meeting of the Chicago Gynecological Society, April 17, Dr. Elmer L. Sevringhaus, Madison, Wis., discussed "Current Endocrine Problems in Gynecology" and "A Study of Women with Irregularities of Menstruation"; Carl R. Moore, Ph.D., of the University of Chicago, and Dr. Ralph E. Campbell of the University of Wisconsin Medical School, Madison, discussed these papers.

—Dr. Victor G. Heiser, formerly director of Far East for the International Health Board, Rockefeller Foundation, delivered the Gehrmann Lectures for 1935-1936 in the Medical and Dental Laboratory Building, 1853 West Polk Street, April 29-30 and May 1. The titles of the lectures were "Coordination of Disease Control Throughout the World by the League of Nations"; "International Research in Leprosy," and "Dietary Opportunities in Preventive Surgery."

—The Institute for Psychoanalysis of Chicago announces the following lectures and seminars during its third quarter of the current year:

Mortimer Adler, Ph.D., Methods and Subject Matter of Psychology.

Drs. Franz G. Alexander and Thomas M. French, alternately, Psychoanalytic Interpretation of Psychotic Cases.

For the members of the Chicago Psychoanalytic Society and the candidates of the institute only, the following is offered:

Dr. Alexander, Clinical Conferences.

Dr. Alexander, Termination of Analyses (seminar on technic).

Dr. French, Seminar on Review of Psychoanalytic Literature.

Registration for the courses should be made in advance. Fees vary for the courses. The first session began April 4, but new courses are scheduled to begin in subsequent weeks, extending into June. Address the Institute for Psychoanalysis, 43 East Ohio Street, Chicago.

—Rear Admiral Norman J. Blackwood has announced his retirement as medical director of Provident Hospital, after more than five years service there. He graduated at Jefferson Medical College, Philadelphia, in 1888 and entered the navy in 1889, advancing through the grades until 1929, when he was retired as a rear admiral. Provident Hospital, a training center for Negro medical workers, is housed in the remodeled home of the old Chicago Lying-In Hospital. The development and maintenance of the center was made possible by a $3,000,000 fund subscribed in 1930, $1,000,000 of which was a gift from the General Education Board of the Rockefeller Foundation. Dr. John W. Lawlah, director of the institution's x-ray department, has been appointed to succeed Dr. Blackwood. He is 32 years of age and graduated from Rush Medical College in 1932.

—The twenty-seventh annual meeting of the Illinois Tuberculosis Association was held at the Orlando Hotel, Decatur, April 6-7. Dr. William A. Hudson, chief, division of thoracic surgery, Grace Hospital, Detroit, conducted a clinic on intrapleural pneumolysis. The speakers on the program included:

Dr. David O. N. Lindberg, Decatur, Role of the Chest Roentgenogram in Tuberculosis.

Dr. Robinson Bosworth, Rockford, Essential Considerations Affecting the Selection of Patients Who May Profit Most from Sanatorium Treatment and Primary Reasons for Eliminating Certain Groups from the Sanatorium.

Dr. Arthur S. Webb, Wheaton, Basic Elements in Sanatorium Treatment.

Dr. Herbert L. Pettit, Morrison, Problems Facing the Physician Treating Tuberculosis in the Home.

Dr. Irenaeus L. Foulon, East St. Louis, A. Practical Approach to the Tuberculosis Problem in the Large Counties of Southern Illinois Which Have a Large Negro Population.

At the annual banquet Tuesday evening, Dr. Gerald B. Webb, Colorado Springs, gave "An Outline of the History of Tuberculosis."

—The Faculty and Alumni of Northwestern University Medical School will hold their annual reunion on June tenth, eleventh, and twelfth. An exceptionally interesting program awaits the visiting alumnus this year. All alumni are especially urged to attend the Annual Faculty-Alumni Dinner on the evening of Friday, June 12. Headquarters, Room 403, Montgomery Ward Building, McKinlock Campus, Chicago, Illinois.

—As a part of the general reorganization of the department of psychiatry at Michael Reese Hospital, Dr. Martha Goldinger Wilson MacDonald has been appointed in charge of child psychiatry and Dr. Milton L. Miller, resident psychiatrist in charge of the inpatient service. Dr. MacDonald is a graduate of the University of Pittsburgh School of Medicine and has been associated with the Danvers State Hospital, Danvers, Mass., the Illinois Institute of Juvenile Research and the Payne-Whitney Psychiatric Clinic, New York. Dr. Miller graduated from Harvard Medical School. He served on the staff of the Enoch Sheppard-Pratt Hospital in Baltimore and, under a fellowship of the Rockefeller Foundation, studied one year at Queen Square Hospital, London, and one year at the Payne-Whitney Psychiatric Clinic, New York. Dr. Jacob Kasanin, formerly clinical director of Rhode Island State Hospital for Mental Diseases, Howard, R. I., was recently appointed director.

Deaths

Donald Putnam Abbott, Chicago; Rush Medical College, Chicago, 1910; a Fellow A. M. A.; associate clinical professor of medicine at his alma mater; intern at the Cook County Hospital, 1910-1911; did graduate work in Vienna in 1914; member of the Central Society for Clinical Research, Institute of Medicine of Chicago, and the Society of Internal Medicine of Chicago; served in the medical corps of the U. S. Army in France during the World War; author of the chapter on "Carcinoma of the Stomach" in Tice's System of Medicine; aged 51; attending physician to the Presbyterian Hospital, where he died, March 26, of pulmonary embolus following bronchopneumonia.

John Edward Hall Atkeisson, Chicago; Vanderbilt University School of Medicine, Nashville, 1897; a Fellow, A. M. A.; staff anesthetist at Grant, St. Mary of Nazareth, Columbus and Lutheran Memorial hospitals; aged 61; died at Grant hospital, March 1, of myocarditis and coronary sclerosis.

George Troy Bailey, Chicago; Northwestern University Medical School, 1894; a Fellow, A. M. A.; formerly assistant medical director New York Life Insurance Company; aged 71; died, January 31, of coronary sclerosis.

Roy Edgar Barrows, Cairo, Ill.; Northwestern University Medical School, 1909; a Fellow, A. M. A.; Member of staff, St. Mary's Hospital, Cairo; connected with U. S. Public Health Service for 20 years; aged 51; died while on visit to Mishawaka, Ind., March 20, of coronary thrombosis.

Henry Andrew Benz, Northbrook, Ill.; Rush Medimal College, Chicago, 1888; aged 72; died, Dec. 7, 1935, in Chicago, of prostatic hypertrophy.

William Bonnar, Chicago; Medical Faculty, Trinity University, Toronto, Canada, 1882; a practitioner in Chicago over 40 years; graduate in law of Kent College; aged 81; died, February 29, of chronic myocarditis.

David Paul Caldwell, Sidell, Ill.; Hahnemann Medical College, 1916; member of Illinois State Medical Society; aged 43; died suddenly while attending a patient, February 2.

Thomas Allen Clark, Mount Vernon, Ill.; St. Louis University School of Medicine, 1904; member of the Illinois State Medical Society; past president and secretary of the Jefferson-Hamilton County Medical Society; aged 61, died, January 25, in the Missouri Baptist Hospital, St. Louis, of acute dilatation of the heart and ulcer of the duodenum.

Robert Hanson Craig, Charleston, Ill.; Louisville Medical College, 1900; a Fellow, A. M. A.; Secretary Coles County Medical Society 15 years; member Aesculapian Society of Wabash Valley; New York Central Association Railway Surgeons; on staff of Charleston Hospital; Chairman Board of Health several terms; aged 62; died, February 20, of septicemia from wound received when operating on case of purulent cellulitis.

Daniel H. Cunningham, Chicago; Jefferson Medical College, Philadelphia, 1893; practitioner in Chicago 41 years; aged 71; died, December 28, 1935, of chronic nephritis.

Nettie D. Morey Errant, Chicago; Woman's Medical College, Chicago, 1885; aged 79; died, January 19, of cronchopneumonia.

Henry Stephen Fletcher, Chicago; Dearborn Medical College, Chicago, 1907; formerly on the staff of the Welles Park Hospital; aged 63; died, January 20, in the Augustana Hospital, of ascending urinary infection and prostatic hypertrophy.

Otto Herman Friedmann, La Grange, Ill.; Rush

Medical College, 1927; surgeon of La Grange post, American Legion; aged 37; died, March 29, in Billings Memorial Hospital, of coronary occlusion.

William Bernard Funk, Chicago; Dearborn Medical College, Chicago, 1907; University of Illinois College of Medicine, 1910; aged 56; died, in St. Bernard's Hospital, February 4, of chronic myocarditis and chronic nephritis.

Louis J. Gordon, Edwardsville, Ill.; St. Louis College of Physicians and Surgeons, 1899; aged 61; died, February 20.

Elijah George Harris, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1915; aged 68; died, February 15, of impacted gallstones.

David Lewis Holland, Chicago; Loyola University School of Medicine, 1917; a Fellow, A. M. A.; aged 55; died, February 18, of chronic myocarditis and chronic nephritis.

Fred August Karst, Wilmette, Ill.; Hahnemann Medical College and Hospital, Chicago, 1887; a Fellow, A. M. A.; practitioner in Chicago for 50 years; aged 82; died, February 27, of angina pectoris.

Frank M. Kindig, Chicago; Northwestern University Medical School, 1894; a Fellow, A. M. A.; aged 75; died January 31, in Wesley Memorial Hospital from fracture of the hip and accidental burns of foot.

Tully Joseph Liddell, Chicago; Tulane University of Louisiana School of Medicine, 1912; a Fellow, A. M. A.; executive officer of the United States Marine Hospital, Surgeon in U. S. Public Health Service; aged 49; died, December 22, 1935, of thrombosis of the coronary artery. (34476.)

Willis Edward Lingle, Cobden, Ill.; St. Louis College of Physicians and Surgeons, 1894; aged 64; died suddenly March 27.

John Ralph Mabee, Chicago; University of Louisville School of Medicine, 1895; aged 63; died, February 12, in Alexian Brothers Hospital, of diabetes mellitus.

Richard Franklin Marrs, Macomb, Ill.; Eclectic Medical College of Cincinnati, 1889; president of McDonough County Medical Society and oldest practicing physician in the county; on staff of Phelps Hospital; aged 74; died at the Hospital, March 18, of myocarditis.

John Benjamin Matthews, Blue Mound, Ill.; National University of Arts and Science, St. Louis, 1875; who as a boy, knew Abraham Lincoln, and was in active practice 60 years; aged 86; died suddenly, February 17.

James P. McCormick, Winnetka, Ill.; Queens University Faculty of Medicine, Kingston, Ont., 1906; Hahnemann Medical College, Chicago, 1907; a retired Canadian physician; aged 54; died suddenly when visiting a neighbor, December 20, 1935.

John A. McHugh, Chicago; Harvey Medical College, Chicago, 1901; on staff of Garfield Park Community Hospital, where he died, March 28, aged 63, of hypertensive heart disease.

Albert Corydon McGee, McNabb, Ill.; Eclectic Medical College, Cincinnati, 1881; a practitioner for many years who introduced the first telephone in his community; aged 80 years; died in La Salle Hospital, February 20, of pneumonia.

Ellen Miner, Champaign, Ill.; Keokuk Medical College, 1892; aged 82; died in Manteno State Hospital, October, 1935.

Frederick Atkins Moore, Chicago; University of West Tennessee College of Medicine and Surgery, Memphis, 1916; aged 46; died Dec. 25, 1935, of carcinoma of the intestine with metastasis to the liver.

Everett Peek, White Hall, Ill.; Chicago College of Medicine and Surgery, 1907; died at the home of his sister, in Houston, Texas, March 21.

Frank F. Petty, Lawrenceville, Ill.; Hospital College of Medicine, Louisville, 1902; aged 65; died in Good Samaritan Hospital, Vincennes, February 26, of pneumonia.

Nathan Starr, Charleston, Ill.; Hahnemann Medical College, 1889; member of Illinois State Medical Society; former president of Illinois State Homeopathic Medical Association; member Aesculapian Medical Society of Wabash Valley; on staff of Charleston Hospital; former president of Board of Education; aged 76; died, March 18, of bronchopneumonia.

Andre L. Stapler, Chicago; Cincinnati College of Medicine and Surgery, 1912; a Fellow, A. M. A.; aged 49; died, February 6, of coronary thrombosis.

Charles Rainey Thomas, Roodhouse, Ill.; Washington University School of Medicine, St. Louis, 1887; member of Illinois State Medical Society; active in civic affairs; aged 73; died, April 3, of coronary thrombosis.

Samuel R. Ward, Richmond, Ill.; Georgetown University School of Medicine; Washington, D. C., 1868; member of the Illinois State Medical Society; formerly mayor, health officer and member of the school board; aged 93; died, January 18, as the result of a fracture of the hip received in a fall.

Frank Fordyce Whetzel, Chicago; Indiana Medical College, 1878; an ex-army surgeon and practioner in Hyde Park district more than 40 years; aged 77; died, February 13, of coronary thrombosis.

Harry Reginald Williams, Lincoln, Ill.; Loyola University School of Medicine, 1931; staff physician of Lincoln State School; member of Illinois State Medical Society; aged 31; died, March 4, of pulmonary tuberculosis.

Albert Willis, Metropolis, Ill.; St. Louis College of Physicians and Surgeons, 1904; aged 54; died, March 6, of a heart attack.

Omer M. Willis, Metropolis, Ill.; St. Louis College of Physicians and Surgeons, 1898; aged 59; died, January 8.

Charles T. C. Wilson, Champaign, Ill.; Cincinnati College of Medicine and Surgery, 1890; retired physician since 1916; aged 71; died, March 24, in Carle Hospital, Urbana, following a cerebral hemorrhage.

James Abram Womack, Equality, Ill.; University of Tennessee College of Medicine, Memphis, 1884; former state senator; aged 76; died, March 30.

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